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SIXTEENTH

ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF INDIANA

LANE LIBRARY
FOR THE

FISCAL YEAR ENDING OCTOBER 31, 1897.
AND THE STATISTICAL YEAR ENDING SEPTEMBER 30, 1897.

TO THE GOVERNOR.

INDIANAPOLIS:
WM. B. BURFORD, CONTRACTOR FOR STATE PRINTING AND BINDING.
1898.

THE STATE OF INDIANA,
EXECUTIVE DEPARTMENT,
December 1, 1897. }

Received by the Governor, examined and referred to the Auditor of State for verification of the financial statement.

OFFICE OF AUDITOR OF STATE,
INDIANAPOLIS, December 2, 1897.

The within report, so far as the same relates to moneys drawn from the State Treasury, has been examined and found correct.

A. C. DAILY,
Auditor of State.

Returned by the Auditor of State, with above certificate, and transmitted to Secretary of State for publication, upon the order of the Board of Commissioners of Public Printing and Binding.

CHAS. E. WILSON,
Private Secretary.

Filed in the office of the Secretary of State of the State of Indiana, December 2, 1897.

W. D. OWEN,
Secretary of State.

Received the within report and delivered to the printer this 20th day of January 1898.

THOS. J. CARTER,
Clerk Printing Bureau.

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MEMBERS OF THE BOARD.

H. JAMESON, M. D., President,	- - - -	Indianapolis.
JOHN H. FORREST, M. D., Vice-President,	- -	Marion.
J. N. HURTY, M. D., Secretary,	- - - -	Indianapolis.
T. HENRY DAVIS, M. D.,	- - - - -	Richmond.
E. D. LAUGHLIN, M. D.,	- - - - -	Orleans.

REPORT OF STATE BOARD OF HEALTH.

HON. JAMES A. MOUNT,
Governor of Indiana :

The State Board of Health herewith submits its Sixteenth Annual Report, the same being for the statistical year ending September 30 and the fiscal year ending October 31, 1897.

SUMMARY OF WORK ACCOMPLISHED.

Four regular meetings and one called meeting of the Board have been held during the year, the proceedings being fully given herein.

Letters received, 2,860; letters written, 7,800.

Sanitary circulars, pamphlets and annual reports received, 432; sanitary circulars, pamphlets and annual reports distributed, 36,000.

Water analyses made, 97.

Wells, springs and other sources of water supply condemned and abolished, 82.

Vinegar analyses made, 17.

Diphtheria examinations made, 94.

Sputum examinations made, 18.

Personal visits and sanitary surveys by the Secretary in answer to requests of Health Officers and others, 34. Reasons for and results of same fully given in this report.

Inspections and sanitary surveys made by members of this Board, 4. Reasons for and results fully given in this report.

Quarterly the vital statistics have been collected and tabulated.

Sanitary surveys have been made of the State Prison, State Reformatory, the Insane Hospitals, at Evansville, Richmond and Logansport; also of the School for the Feeble-Minded Youth, at Ft. Wayne.

WORKING FORCE.

In considering the above summary, and also the full reports of the same, it seems proper that you should know that the working force of this Board is limited by the Ways and Means law to two persons, namely, the Secretary at \$1,200 per annum, and the Clerk and Stenographer at \$600 per annum. The latter's salary for the coming year was increased to \$900 per annum by the last Legislature. It further seems proper in this connection, noting the working force allowed, to consider the duties of the State Board of Health as set forth in the statute. The act passed February 19, 1891, says: "The State Board of Health shall have the general supervision of the health and life of the citizens of the State; they shall study the vital statistics, and endeavor to make intelligent and profitable use of the collected records of death and sickness among the people; they shall make sanitary investigations and inquiries respecting the causes of disease, and especially of epidemics, the causes of mortality and the effects of localities, employments, conditions, ingesta, habits and circumstances on the health of the people."

If the catalogue of duties ended here it is obvious to fulfill them would require the constant labor of a number of trained scientists, aided by laboratories and clerks. The value of the results obtained would be beyond calculation.

The law further prescribes: "They shall have power to regulate and prescribe the location of plumbing, drainage, water supply, disposal of excreta, heating and ventilation of any public building or institution, and to inspect the same. They shall annually, on or before the first day of December, make a report to the Governor of their doings and investigations for the year ending October 31, next preceding, with such suggestions with regard to legislation as they may deem important in reference to the public health."

Section 6713, R. S. 1894: "The Secretary of the Board shall keep his office at Indianapolis, and shall perform such duties as are prescribed by this act or may be required by the Board. He shall keep the custody of all papers, books, documents and other property belonging to the Board. He shall, so far as practicable, communicate with other State Boards of Health, and with the County Boards of Health within his State. He shall keep and file all reports re-

ceived from such Boards, and all correspondence of the office appertaining to the business of the Board. He shall prepare blank forms of returns and such instructions as may be necessary, and forward them to the Secretaries of the several County Boards of Health throughout the State. He shall collect information concerning vital statistics, knowledge respecting diseases, and all useful information upon the subject of hygiene, and through an annual report and otherwise, as the Board may direct, shall disseminate such information among the people."

Section 6717: "The State Board of Health shall have supervision of the registration of births, deaths and marriages, as herein provided, and they shall make up such forms from time to time, as they may deem necessary, for the thorough registration and report of vital and sanitary statistics throughout the State. The Secretary shall be superintendent of all such registration, and, with consent of a majority of all members of said Board, shall have the power to appoint and fix the compensation of any clerical force that may, within his judgment, be or become necessary for the making and keeping the records of said Board of Health."

It appears from a careful perusal of the above that the law clearly recognizes what is necessary to be done in the way of protecting the public health, and it seems strange that such imperfect and insufficient means for carrying out the requirements have been provided. The importance and value of accurate vital statistics to a civilized state can not be overstated, yet Indiana's law which is intended to secure this advantage falls far short of doing it; in fact, partly preventing the end aimed at.

The first step in this important and valuable work devolves upon a County Health Officer who is not required to be trained in the work; who is appointed by the County Commissioners for only one year, and who is paid from \$18.00 to \$200.00 per annum, according to circumstances. This same Health Officer, whom the law does not require to be informed in sanitary science and hygiene, whose term of office is so brief he can hardly become informed in his duties before his official term expires, has his duties thus set forth in the statute: "His duty shall be to protect the public health by the removal of causes of diseases when known, and in all cases to take prompt action to arrest the spread of contagious diseases, to abate and remove nuisances dangerous to the public health, to collect

vital statistics and perform such other duties as may from time to time be required by the State Board of Health pertaining to the health of the people."

All of these duties bear directly upon the life, liberty, pursuit of happiness, and economic interests of the people. For failing to provide efficient ways and means for fulfilling the duties which it so wisely prescribes, the law is clearly deficient.

To remedy these difficulties the State Board recommends legislation as follows: Every county to have a Board of Health composed of the County Surveyor, County Attorney and a physician appointed by the State Board of Health. The physician to be especially informed in hygiene and sanitary science and to be Secretary of the Board; to be subordinate to the State Board, and to receive compensation at a fixed amount for each one thousand inhabitants the county contains. The term of office should be for four years.

The Secretary of the State Board of Health should be a physician *especially trained and informed in hygiene and sanitary science. He should give his whole time to the work of his office and be properly compensated, with a term, as now, of four years.*

The appropriation should be sufficient to render it possible for the State Board to fulfill the requirements of the law and the duties placed upon it.

The collection, tabulation and analyses of the vital statistics of a State like Indiana, containing a population of over two and one-half millions, is, if rightly done, a most important and stupendous piece of work. It is a duty which naturally belongs to the health authorities of a State, but should be conducted by a person of medical and sanitary knowledge who is also informed and skilled in statistical work. The Board, therefore, should be privileged to employ such a person (the law at present forbids) especially for the work, for the many other duties of the Secretary make it impossible for him to do it well and thoroughly. The statistics herewith presented illustrate this point. They are not full or accurate as they should be, and no one informed of the situation would expect them to be accurate. The first difficulty lies in the law requiring the Secretaries of the County Boards, who are to collect the vital statistics of their counties, to be appointed for a term too short to enable them to properly master the work; in not paying them properly, and in not requiring them to be informed and competent in every

way. If this imperfection were removed, and if the assembling, tabulating, etc., was intrusted to a trained statistician under the authority of the State Board, it would be possible to do as the law commands, to "study the vital statistics, and endeavor to make intelligent and profitable use of the collected records of death and sickness among the people."

SUMMARY OF THE YEAR'S VITAL STATISTICS.

For the year ending September 30, 1897, there was reported to the State Board of Health by the County Boards of Health:

Total number of deaths	16,244
Total number of births	32,274
Total number of marriages	20,419

According to the reports the mortality of the following diseases was:

Diphtheria	943
Pulmonary Phthisis	1,794
Pneumonia	1,181
Scarlet fever	55
Typhoid fever	655
Measles	92

Counting the population of Indiana at 2,250,000, the death rate from the above reported figures would be 7.21 per 1,000 of population, a figure certainly one-half too low, for the rate can not be less than 15 per 1,000, more likely 17 or 18 per 1,000. Even the number of births and marriages are not accurate, the former probably being one-tenth greater than reported, and the deficiency in the latter is unknown. The question, Why is this so? is most pertinent. One county—Parke—has made no report for the year, and for the last quarter no reports have been received from Lake, Scott and Warren counties. The Prosecutor from Parke has been informed of this defiance of the law by Parke's officials, which is as far in the matter as the State Board of Health can go under the law. The Health Officers of Lake, Scott and Warren counties have been repeatedly urged to perform their duties, but no response has been received.

The incompleteness of the statistics is increased by the further fact that many physicians refuse or neglect to report deaths and cases of contagious diseases to the County or other Health Officers. Physicians so refusing contend that it is contrary to their business interests to have to report their affairs to a competing practitioner, who is the Health Officer, and also that the law can not impose such duties without giving compensation. This last argument is wholly invalid, for physicians belong to a specially licensed class, and therefore the law may require a license fee of any proper amount to be paid in any proper way. The first difficulty could be overcome by having County Health Officers who are trained in hygiene and sanitary science, who can not practice curative medicine while holding the position of Health Officer. A further advantage would be that such Health Officers, being specially trained in disease prevention and having it exclusively to do, would devote themselves to the work of prevention, and scores of lives now needlessly wasted would be saved and thousands of cases of sickness would be prevented.

In regard to the reported figures: if we accept the estimate that the reports are deficient by 50 per cent., the corrected figures would be:

Total deaths	32,488
Diphtheria deaths	1,886
Consumption deaths	3,948
Pneumonia deaths	2,362
Scarlet fever deaths	110
Typhoid fever deaths	1,310
Measles	184

In 1890 the United States Census Enumerators reported 24,180 deaths as having occurred in Indiana. The population of the State at the same census was reported as 2,192,404. This gives a death rate of 11.03 per 1,000, which was unquestionably below the truth. In 1880 the Census Enumerators reported 31,213 deaths, or 15.78 per 1,000 of population. The average death rate for the whole United States in 1890 was 18 per 1,000. It is impossible, from Indiana's vital statistics, to calculate the true death rate, and the expectation of life at each age in each sex. We do know, however, where certain diseases have prevailed, but no comparison can be made between different localities in this regard. Accepting the deaths from consumption to be 3,948, twice the number actually reported, then out of every 1,000 deaths in Indiana during the year

ending September 30, 1897, 121 are to be attributed to this disease. The corresponding figure in the whole United States in 1890 was 121.5. It therefore appears that as far as this disease is concerned we are no worse off than other States. The same method of calculation applied to typhoid fever shows 40.3 deaths out of every 1,000 deaths. The corresponding figure for the whole United States in 1890 was 32.2. This difference does not speak well for Indiana, for typhoid fever is a filth disease.

BIRTHS.

The total number of births reported during the year was 32,274, of which 16,717 were males and 15,557 were females; one thousand one hundred and sixty more males than females. Of these there were 351 colored males and 330 colored females; total, 681. Colored births are in the proportion of 2 per cent. of the total number.

Of the births reported, 26,715 were where father and mother were both American; both foreign, 1,763. In 2,912 cases the father's nationality was not reported, and in 1,556 that of the mother was not given. The greatest number of births was in July; the least number was in June.

The total number of plurality births reported during the year was 655, 346 males and 349 females. In five instances triplets have been born during the year.

Illegitimate births reported during the year was 583, as against 552 for the previous year. Nine counties of the State show no illegitimate births, namely: Cass, Decatur, Huntington, Jasper, Newton, Noble, Porter, Starke and Noble.

MARRIAGES.

The total number of marriages reported during the year was 20,419; 819 less than was reported for the previous year. The marriage rate for this year per 1,000 of the living population was 7.7. Of the contracting parties, 453 were colored. There were 1,020 grooms foreign-born and 755 brides; 435 grooms under twenty years of age and 5,029 brides; 11 grooms over eighty and 1 bride. There were 1,900 brides and grooms whose ages were not reported.

Clark County has more marriages, according to population, than any other county in the State.

CHEMICAL AND BACTERIOLOGICAL ANALYSES.

Ever since its creation the State Board of Health has been appealed to by county officials and private citizens for opinions in matters involving chemical and bacteriological analyses. Indeed, without the aid of the sciences of chemistry and bacteriology, and also of sanitary engineering, it is utterly impossible to make, as the law commands, "sanitary investigations and inquiries respecting the causes of disease, and especially of epidemics, and the effects of location, employments, conditions, ingesta, habits and circumstances on the health of the people." To be able in some degree to fulfill the requirements, and also to be able to answer a few of the citizens applying for sanitary, chemical and bacteriological investigations, the Board, at its regular meeting, March 30, 1897, authorized the Secretary to have done certain analyses of this character. Arrangements were therefore made for making free sanitary water analyses, milk, food, and vinegar analyses, to furnish serum tubes for diphtheria diagnosis, and to examine the same microscopically, and to make sputum examinations to aid in the diagnosis of pulmonary consumption.

Special circulars were sent to the County Health Officers announcing the arrangements that had been made and clearly stating the conditions under which certain analyses would be performed. That the step was wise and demanded by the people is attested by that fact that the applications to have water analyses made, to determine possible sources of typhoid fever and dysentery, became so numerous as to compel the Board, on account of lack of means, to call a halt on the work.

The demand for bacteriological aid in diagnosing diphtheria has been partially met, while every sample of sputum sent in has been examined and reported upon. A few vinegars have been analyzed, but all samples of milk and other foods had to be refused.

Without a well-equipped sanitary laboratory the State Board of Health can do very little toward determining the causes of diseases and epidemics, and *nothing whatever* toward enforcing the laws against food adulteration. To establish a laboratory, only \$2,500

would be required, and the annual benefits would be one hundred times this amount. Reference to the chemical and bacteriological report will show that of the 97 water analyses made it was found that 82 of these waters were sources of disease. The whole 97 were suspected or they would not have been sent to us, and as a result of this work alone not a little sickness and possibly some deaths will be prevented.

It is desired in this connection to call attention to the conditions injuriously affecting sources of public water-supply, which grow worse each year, and the remedy correspondingly more difficult to apply. The population along our streams is rapidly increasing, and as villages grow into cities sewer systems are introduced and the streams made use of for sewage disposal. Often the same stream affords the only available source of a public water-supply for such towns. Each is at the mercy of the town above, and is forced to drink water polluted with the excrement of its up-river neighbors. The remedy is to place the whole question of sewage disposal and water-supply in the hands of the State Board of Health, as has been done in Massachusetts and Ohio. The proper disposal of sewage and the preservation of the purity of public water supply directly bears upon the life and happiness of the people, and demands early attention.

FINANCIAL EXHIBIT.

Following is a statement of the receipts and expenditures for the fiscal year commencing November 1, 1896, and ending October 31, 1897.

The members of this Board are not compensated for their services; their expenses only in attending meetings and in performing sanitary work are borne from the general appropriation of \$4,000. The following expenses are met from the \$4,000 appropriation:

Secretary's salary, \$1,200; salary of Clerk and Stehographer, \$600; printing bills, including all publications of the Board except the annual report. The Board supplies all the town, city and county Boards of Health blanks for the return of births, deaths, contagious and infectious diseases; county clerks for the return of marriages, and furnishes county Boards of Health with blanks to make regular quarterly reports, as well as blanks for special sanitary surveys, special circulars for conveying sanitary information to the people, transit permit blanks for the transportation of dead bodies, the necessary printing for the annual sanitary convention, etc., etc.

After paying all bills contracted for the year, we find the amount appropriated has been exhausted.

RECEIPTS.

By Appropriation\$4,000

DISBURSEMENTS.

1896.		
Dec. 16.	Wooden Novelty Co., test boxes.....	\$16 00
" 16.	H. T. Conde Impl. Co., ink.....	90
" 16.	Parke, Davis & Co., serum tubes.....	5 00
" 16.	Albert Sahm, postage	30 00
" 16.	Secretary, traveling expenses.....	35 55
" 16.	Wm. H. Armstrong & Co., Formaldehyde Gen- erator	3 60
" 16.	May Stuart, services	52 50
" 16.	T. Henry Davis, attending Board meeting...	10 00
" 30.	J. H. Forrest, attending Board meeting....	15 00
" 30.	D. C. Ramsey, attending Board meeting....	25 00
" 30.	L. L. Whitesides, attending Board meeting..	10 00

Dec. 30.	Univ. Penn. Press, subscription.....	\$2 00
" 30.	Secretary, traveling expenses.....	13 31
" 30.	Parke, Davis & Co., serum tubes.....	5 00
" 30.	May Stuart, services	15 00
" 30.	Clarence Worrell, services	8 94
" 30.	L. L. Whitesides, attending Board meeting..	10 00
" 30.	J. H. Forrest, attending Board meeting.....	15 00
" 30.	American Toilet Supply Co., laundry.....	1 00
" 30.	Serverance Burrage, traveling expenses.....	11 61
" 30.	Journal American Medical Association, sub.	4 16
Feb. 10.	Secretary, traveling expenses	15 20
" 10.	Albert Sahn, postage	30 00
" 16.	Wm. B. Burford, stationery.....	2 62
" 16.	Wm. B. Burford, stationery and printing....	30 00
April 1.	American Toilet Supply Co., laundry.....	2 00
" 1.	Wm. B. Burford, printing and stationery....	64 85
" 1.	E. D. Laughlin, attending Board meeting....	12 80
" 1.	J. H. Forrest, attending Board meeting.....	4 75
" 1.	T. Henry Davis, attending Board meeting....	4 80
" 1.	Secretary, traveling expenses	8 70
" 19.	Albert Sahn, postage	30 00
" 19.	H. M. Houser, Medical Dictionary	13 00
" 19.	Geo. J. Mayer, stencil and figures.....	1 85
May 11.	Wm. B. Burford, printing and stationery....	29 24
" 11.	Cathcart & Cleland, books	31 38
" 11.	E. D. Laughlin, attending Board meeting....	11 70
" 11.	T. Henry Davis, attending Board meeting....	4 95
June 8.	Mary J. Burke, reporting conference.....	20 00
" 8.	Wm. B. Burford, printing and stationery....	114 14
" 11.	May Stuart, indexing report	4 50
" 11.	Albert Sahn, postage	30 00
" 11.	A. N. Bell, subscription, Sanitarian.....	20 00
" 11.	Secretary, traveling expenses.....	85 96
July 11.	Wm. B. Burford, printing and stationery....	11 30
" 11.	Albert Sahn, postage	30 00
" 11.	Secretary, vinegar analyses	9 00
" 11.	United States Express Co.....	14 40
Sept. 1.	Secretary, traveling expenses and expresses..	108 85
" 1.	Wm. B. Burford, printing and stationery....	158 76
" 1.	U. S. Express Co.....	2 20
" 1.	Parke, Davis & Co., culture tubes.....	5 00
" 1.	Secretary, vinegar analyses	6 00
" 1.	E. D. Laughlin, traveling expenses	29 20
" 1.	Albert Sahn, postage	50 00
" 1.	J. H. Forrest, traveling expenses.....	6 80
" 1.	T. Henry Davis, traveling expenses	5 65
" 1.	American Toilet Supply Co., laundry.....	3 00
" 1.	Parke, Davis & Co., serum tubes.....	10 20
" 1.	Cathcart & Cleland, books.....	7 50
" 1.	H. T. Conde Impl. Co., ink.....	50

Sept. 1.	United States Express Co., expressage.....	\$3 60
" 1.	B. W. S. Wiseman, livery.....	2 00
" 11.	Elzlar Pelletier, dues	5 00
Oct. 21.	Pettis Dry Goods Co., merchandise.....	2 20
" 21.	Central Union Telephone Co., telephone service	18 00
" 21.	Edwin R. Pillett, rubber keys.....	3 00
" 21.	Smith Premier Typewriter Co., typewriter desk	32 50
" 21.	Smith Premier Typewriter Co., typewriter...	87 75
" 21.	Wyckoff, Seamans & Benedict, supplies.....	1 60
" 21.	Albert Sahm, postage	50 00
" 21.	Rotary Neostyle Co., neostyle	50 00
" 21.	Richards & Co., laboratory supplies.....	184 75
" 21.	Secretary traveling expense	86 50
" 21.	Secretary traveling expense	64 78
" 21.	J. H. Forrest, traveling expenses.....	94 74
" 21.	E. D. Laughlin traveling expense.....	87 50
" 21.	William B. Burford, printing and stationery.	104 64
" 21.	Secretary's salary for year ending Oct. 30...	1,200 00
" 21.	Clerk's salary for year ending Oct. 30.....	600 00
	Turned into general fund.....	25
Total		<hr/> \$4,000 00

FIRST QUARTER.

MINUTES OF REGULAR MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Dec. 16, 1896.

Regular meeting of the Indiana State Board of Health.

Meeting called to order at 10 a. m. Present: Ramsey, Forrest, Davis and Hurty.

Minutes of last meeting read and approved.

The following bills and expenses of members audited and allowed:

BILLS ALLOWED.

Wm. H. Armstrong, formaldehyde generator.....	\$3 60
H. T. Conde Implement Company, ink.....	90
Parke, Davis & Co., serum tubes.....	5 00
Wooden Novelty Co., boxes.....	16 00
May Stuart, services.....	52 50
J. N. Hurty, traveling expenses.....	35 55
Albert Sahm, postage.....	30 00
L. L. Whitesides, traveling expenses.....	10 00
J. H. Forrest, traveling expenses.....	15 00
D. C. Ramsey, traveling expenses.....	25 00
T. Henry Davis, traveling expenses.....	10 00
G. S. Carter, salary.....	100 00
J. N. Hurty, salary	200 00
	<hr/>
	\$503 55

The text of the forthcoming report was presented, reviewed and approved.

The following communication was received:

To the State Board of Health of the State of Indiana:

Honorable Sirs—The city of Franklin, situated in Johnson County, Indiana, occupies and controls a cemetery, consisting of about twelve acres of ground, which was established some fifty years ago, outside of the then corporate limits of the town of Franklin; that the town was organized into a city some thirty years ago and its corporate limits extended beyond and including said cemetery.

The City Council has now commenced proceedings to condemn, as an addition to said cemetery, ten acres of ground nearer to and within four squares of the business center of the city, upon the north, east and south of which are residence buildings.

The owner of the land attempting to be condemned and many of the citizens of said city are resisting such condemnation on the ground of the anticipated injury to the health and comfort of the citizens of said city,

and, if such matters come within the jurisdiction of your honorable board, said citizens would ask the aid of your board to prevent the location of said addition to said cemetery.

J. C. WOOD, M. D.,
Secretary of City Board of Health.

Ordered: That Dr. Whitesides inform the petitioners that the Board had a rule governing this matter, and that the County Secretary should enforce said rule.

Moved by Dr. Whitesides, that a special meeting on account of health legislation be called for Wednesday forenoon, Dec. 30th.

Carried.

Adjourned.

Approved in regular meeting March 30, 1897.

D. C. RAMSEY, *President.*

J. N. HURTY, *Secretary.*

MINUTES OF SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Dec. 30, 1896.

Special meeting. Present: Whitesides, Forrest and Hurty.

Called to order at 11 a. m.

The proposed legislation was read and carefully considered.

The following bills were allowed:

J. N. Hurty, traveling expenses.....	\$13 31
University of Pennsylvania Press, subscription.....	2 00
Clarence Worrell, assisting with tables.....	8 94
Parke, Davis & Co., tubes.....	5 00
American Toilet Supply Co.....	1 00
L. L. Whitesides, traveling expenses.....	10 00
J. H. Forrest, traveling expenses.....	15 00
	<hr/>
	\$55 25

Adjourned.

Approved in regular meeting, March 30, 1897.

D. C. RAMSEY, *President.*

J. N. HURTY, *Secretary.*

SECOND QUARTER.

MINUTES OF REGULAR MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, March 30, 1897.

Regular meeting of the Indiana State Board of Health.

Meeting called to order at 11 a. m. by the Secretary, as the Board was without organization. Members present: Davis, Forrest, Jameson, Laughlin and Hurty.

Dr. T. Henry Davis was unanimously elected President for two years.

Dr. Davis immediately resigned, saying he did so believing that the interests of the State and Board could be better served by having at the present time, on account of contemplated reforms, the President at the capital, and thereupon nominated Dr. Henry Jameson to serve for two years.

Dr. Jameson was unanimously elected.

Dr. Laughlin nominated Dr. Forrest for Vice-President, seconded by Dr. Davis.

Dr. Forrest was unanimously elected for two years.

Minutes of last regular and last special meetings read and approved.

Dr. Laughlin moved that President Jameson sign minutes of last two meetings just approved. Carried.

Ordered: The Secretary shall subscribe for "The Sanitarian," "Annals of Hygiene," "Dietetic and Hygienic Gazette."

Ordered: That the Secretary of this Board shall inform all Secretaries of County Boards of Health that from this date said Secretaries shall send to this office their quarterly reports within twenty days after the end of each quarter. If any of the County Secretaries fail or neglect to so report, the Secretary of the State Board of Health is hereby ordered to report their failure to their respective County Boards of Health, with the request that said delinquent County Health Officer be removed.

Ordered: The Secretary shall issue quarterly a pamphlet to be called the Bulletin of the Indiana State Board of Health; 2,000 copies shall be printed and distributed free to all county, city and town Health Officers, to all State Boards of Health and to others who may wish the same. Said Bulletin shall present vital statistics of Indiana, a full account of the work done for the quarter it represents, and such other matters pertaining to public health as the

Secretary in his discretion may deem proper. The object is to disseminate sanitary information, to the end that public health may be bettered.

Ordered: The Secretary shall purchase Stevenson's and Murphy's Work on Hygiene and Sternberg's Bacteriology.

Ordered: The Secretary shall inform all Health Officers in the State that the State Board of Health is prepared to make sanitary water analyses, diphtheria culture examinations, sputum examinations and typhoid examinations without charge. The acceptance and proposed analysis of samples subject to the order of the State Board of Health. The Secretary shall procure the proper outfits, as serum tubes, glass stoppered bottles, printed blanks, etc., which may be necessary to carry out the above order. An exact and full record of all work herein mentioned shall be kept by the Secretary. The President and Secretary are hereby empowered to have such analyses made by careful and competent chemists at a price not to exceed \$5.00 for each sanitary water analysis, \$1.00 for each diphtheria culture examination, \$1.00 for each typhoid examination and \$1.00 for each sputum examination.

Ordered: The President and Secretary prepare an order of business for the Board, and report at next meeting.

Moved by Dr. Forrest, that the President appoint such committees as he may deem proper to forward the work of the Board.

Unanimously carried.

Ordered: The Secretary shall call a meeting of the State Health Officers in annual conference for two days in May. The date to be hereafter decided. He to prepare programs and make all arrangements.

The following bills were allowed:

J. N. Hurty, salary as Secretary.....	\$300 00
Grace S. Carter, salary as clerk.....	150 00
T. Henry Davis, traveling expenses.....	4 80
J. H. Forrest, traveling expenses.....	4 75
E. D. Laughlin, traveling expenses.....	12 80
American Toilet Supply Company, laundry.....	2 00
J. N. Hurty, traveling expenses.....	8 70
Wm. B. Burford, printing and stationery.....	64 85

\$547 90

Adjourned.

HENRY JAMESON, *President.*

J. N. HURTY, *Secretary.*

THIRD QUARTER.

MINUTES OF REGULAR MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, May 11, 1897.

Regular meeting. Present: Jameson, Davis, Laughlin and Hurty.

Meeting called to order by President Jameson.

Minutes of last meeting read and approved.

QUARTERLY REPORT OF SECRETARY.

Since our last meeting, held March 31, the routine work of the office has been closely looked after. The several orders made at last meeting have been carefully carried out. The County Secretaries have all received a copy of the order that they shall report within twenty days after the end of each quarter. Copy of circular submitted, which reads as follows:

HEALTH CIRCULAR NO. 8.

To Secretaries of County Boards of Health:

At the regular meeting of the State Board of Health for the quarter ending March 31, 1897, the following order was issued, which is self-explanatory:

"Ordered: The Secretary shall inform all Secretaries of County Boards of Health that from this date said Secretaries shall send to this office their quarterly reports within twenty days after the end of each quarter. If any of the County Secretaries fail to so report, the Secretary of the State Board of Health is hereby ordered to report their failure to their respective County Boards of Health, with the request that said delinquent County Health Officer be removed on account of failure to perform his or her duties."

It is suggested that County Secretaries have printed and distributed a circular letter to each practicing physician in their respective counties, calling attention to the statute as it appears in R. S., 1894, Sec. 6720, which says: "It shall be the duty of all physicians and accouchers in this State to report to the Secretary of the Board of Health of the town, city or county in which they may occur under their supervision, with a certificate of the cause of death, and such correlated facts as may be required in the blank forms, furnished as provided in this act."

The penalty for the violation of this act is found in Sec. 6724: "Any person or persons, or the officers of any corporation, who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined in any sum not exceeding one hundred dollars."

The law is plain and unmistakable, and that it can be enforced and that it is the duty of health officers to enforce it, is plain, from the following opinion of the Attorney General:

"The duties imposed by this statute, and the penalty for its violation, are within the police power of the State, and the statute is valid and constitutional. (*Robinson v. Hamilton*, 60 Iowa 134; 46 Amer. R. 63.) In case of *Robinson v. Hamilton*, supra, which was an action for a penalty against a physician for his failure to render a report of a death or birth, as requested by the State Board of Health, the court says: 'It is proper to remark that under the statute brought in question the defendant may be required to report the information sought in the manner prescribed by the Board of Health. The statute requires the collection of statistics pertaining to the population of the State and the health of the people which may impart information useful in the enactment of laws and valuable to science and the medical profession, to whom the people look for remedies for disease and for means tending to preserve health. The objects of the statute are within the authority of the State, and may be attained in the exercise of its police power. Similar objects are contemplated by statutes requiring a census to be periodically taken, the constitutionality of which we have never heard questioned. We need not inquire whether the provisions of the statute are unjust or oppressive. These matters are for the consideration of the legislative department of the government. We may observe that it is difficult to discover oppression or injustice in requiring the medical profession to make known to the world statistics which may promote and are promoting the public health. A physician should honestly endeavor to obtain and report all information required by the regulations of the statute and the Board of Health. This is his duty as a surgeon, and is imposed as an obligation by the ethics of the useful and honorable profession of which he is a member. The statute confers on a physician certain privileges, and may impose corresponding duties.'

"Respectfully,

"FRANCIS T. HORD,

"Attorney General."

County Secretaries should know that all city and town health officers are subordinate, under the statute, to the County Boards of Health, and that they have the power and right to compel from all city and town health officers in their respective counties prompt and complete reports.

In the special notice to physicians concerning the determination of the State Board to secure more perfect vital statistics, it may be well to state that prosecution will surely attend all failures to obey the law.

By order of the State Board of Health.

H. JAMESON, President.

J. N. HURTY, Secretary.

The order that a pamphlet to be called the Bulletin of the Indiana State Board of Health be issued quarterly has been obeyed.

A copy of the first Bulletin is submitted.

For the library there has been purchased as ordered, Stevenson's and Murphy's work on Hygiene, Crookshank's Bacteriology, and Sternberg's Bacteriology and Cabot's Work on the Blood.

In compliance with the order to inform the Health Officers of the State that this Board would make free of charge certain analyses and bacteriological examinations Health Circular No. 7, which is submitted, was printed and sent out.

HEALTH CIRCULAR NO. 7.

FREE ANALYSES AND BACTERIOLOGICAL EXAMINATIONS.

The State Board of Health is now prepared to make, free of charge, under the conditions herewith set forth, sanitary water analyses, food analyses, bacteriological examinations for the diagnosing of diphtheria, phthisis and typhoid fever.

This work will only be done when the same is made of record by county, city or town health officers and when said work will be for the public good.

Any physician, upon application to the State Board, will have promptly sent to him, free of all expense, outfits with blanks for sanitary water analyses, diphtheria cultures and blood examinations for typhoid fever diagnosis. Sputum may be sent by mail in securely corked vials; provided said applicant will give in writing an accurate account of the circumstances which led him to have the work done, and provided, also, that he will carefully fill out the blanks furnished him in duplicate, sending one to the Secretary of the County Board of Health and one to the Secretary of the State Board of Health.

Because of exhaustion of appropriation, or for any other cause which the State Board may consider sufficient, any or all analyses and examinations will be refused.

by order of the State Board of Health.

H. JAMESON, President.

J. N. HURTY, Secretary.

The "outfits" and printed blanks which the Secretary was empowered to purchase were procured as follows:

Two dozen glass stoppered five-pint bottles

Two dozen wooden cases with hinged top.

The bottles are securely held in the cases by excelsior packing. Each case is branded as follows: "Property of the Indiana State Board of Health, Room 24 State House, Indianapolis. Water case No."

A blank as follows accompanies each water case that is sent out.

CERTIFICATE

Accompanying a Sample of Water, to be Enclosed in the Envelope Tag
Addressed to the State Board of Health, Indianapolis.

Unless this blank is completely filled out the analysis will not be made.

SAMPLE OF WATER.

From (name of city or town).....collected and sealed by (name and address of collector).....collected from (state whether the water is from a tap or from stream, pond, well or other source)..... collected on (give day, date and hour of day).....shipped by..... Express Company (give date and hour of day).

REMARKS—In case there are any abnormal or unusual conditions existing in the source of the water, mention the facts. As, for instance, if the streams or ponds are swollen by recent heavy rains or are unusually low in consequence of prolonged drought, or if there is a great deal of vegetable growth in or on the surface of the water. Write on the other side of this certificate.

In case typhoid or acute intestinal disorders are suspected to proceed from the source furnishing this sample of water, our sanitary survey blank for typhoid fever must be filled out and returned to this office.

INSTRUCTIONS FOR COLLECTING SAMPLES OF WATER FOR ANALYSIS.

1. **From a Well.**—Water should be pumped out freely for at least three minutes. Rinse out the bottle with the water it is to contain three times, pouring out the water completely each time. Lastly, fill to overflowing, pour out sufficient to leave an air space of about an inch under the stopper, rinse off the stopper and insert with a twisting motion to the right. Tie in the stopper with the piece of muslin and string herewith supplied. Under no circumstances must the inside of the neck of the bottle or the stem of the stopper be touched by the hand or wiped with a cloth.

2. **From a Tap.**—Allow the water to flow freely from the tap for a few minutes, and then proceed precisely as directed above.

3. **From a Stream or Pond.**—Rinse bottle and stopper with the water it is to contain, without stirring up the sediment on bottom. The bottle, with stopper in place, should then be entirely submerged in the water and the stopper taken out at a distance of twelve inches or more below the surface. When the bottle is full the stopper is replaced as described above. It is important that the sample should be obtained free from sediment or scum. If the stream is not deep enough to admit taking a sample in this way, the water must be dipped up with a clean vessel and poured into the bottle.

SHIP WITHOUT DELAY.

Remarks.....

A tag envelope goes with each case, containing directions for collection, a piece of cloth and string to secure the stopper, and a smaller tag envelope upon which to write return directions and to contain the filled out blanks. Specimens herewith submitted.

The following circular was issued and sent to all State Health Officers in compliance with the order to call the Annual Health Conference.

SEVENTH ANNUAL CONFERENCE OF STATE HEALTH OFFICERS.

The seventh annual conference of the health officers of Indiana will be held in Room 12, State House, at Indianapolis, Tuesday and Wednesday, May 11 and 12. All county, city and town officers are urged to attend. The importance and value of this annual meeting cannot be overstated.

The County Health Officers who attend will please prepare a succinct account for 1897 of their work, of the sanitary condition of their county, and set forth its sanitary needs.

Besides the many interesting papers and their discussions, the conference will be given a reception Tuesday evening, May 11, by the Medical Department of the University of Indianapolis.

H. JAMESON, President.

J. N. HURTY, Secretary.

Under the special order of this Board, the Secretary has examined since last meeting two diphtheria cultures:

No. 1—April 1. Patient, Earl Kendy; address, Richmond, physician, M. T. Johnston. Result positive.

No. 2—April 8. Patient, Maud Rice; address, Newton; physician, R. W. Claypool. Result positive.

The waters analyzed were eight in number. Four samples were from Dr. Bates at Broad Ripple; two from Clark Cook, M. D., Fowler; one from Dr. C. H. Walden, New Market, and one from A. J. Gray, M. D., Young America.

All eight samples were strongly suspected to be impure, yet chemical analysis and bacteriological examination condemned only five of the number. A sanitary survey accompanied each sample and were properly filled.

On April 14th I made a visit to North Vernon on account of a sudden outbreak of diphtheria at that point. Letters from that town invoked our assistance and complained of the inefficiency of the County Health Officer, Dr. Hanna, living at Paris Crossing. A local newspaper, "The North Vernon Republican," gave an editorial scoring the County Health Officer and demanding protection by the health department.

My visit discovered the same old condition. Diphtheria had suddenly appeared in a family near town. The local doctors had disputed over the complaint, some saying it was true diphtheria and

some denying it. In the meantime two children died and the disease was spreading. The first step was to establish rigid quarantine; order that all suspicious cases of throat trouble be called diphtheria until positively determined by cultures; that no public funerals of persons dead of throat trouble be held and that thorough disinfection be practiced. After the enforcement of these measures the epidemic ceased.

On April 21 I visited Covington, Attica and Williamsport on account of typhoid fever. The Health Officer and also the Commissioners of Fountain County were met in consultation and directions for the control of typhoid were given.

At Attica and also at Williamsport the Health Officers were given full instructions in the same matter. Expenses to North Vernon were \$6.80. To Covington, Attica and Williamsport, \$9.76.

Moved by Dr. Davis, that the Secretary be ordered to subscribe for the Sanitarian for each member of the Board.

Carried.

Moved by Dr. Davis, that the Secretary shall at each quarterly meeting make a full written report for all work done for the preceding quarter.

Carried.

REPORT OF DR. LAUGHLIN.

In compliance with a resolution offered at our meeting in March, that Dr. Forrest and myself should present to the Board some thoughts on a method of organization by which sanitation might be brought more fully before the public and its observance enforced to a greater degree than at present obtains, I would submit the suggestion that the only method that seems feasible to my mind by which such teaching and practice can properly be presented to the public would be through the various Health Boards, county and municipal, as now organized, or else through documents directly issued from this office.

Which of those methods would be most feasible, I confess, is a problem not easily solved.

If a history of the working of the various Health Boards of the State be had since the enactment of the present health law in regard to the derelict manner in which it has been enforced by those in whose hands it has been placed, and more especially by the medical profession whose duty it should be, and is, to carry out its pro-

visions making the proper reports, there cannot be much encouragement for hoping that any additional measures in that direction would be received with any greater favor than those that have gone before.

Allow me to say that I do not regard the failure to have the measure of the law carried out so much a lack of duty on the part of the officers as a negligence on the part of the members of the profession at large, whose duty it is to report to the officers upon the subject required, and that negligence seems to be willful in most cases, as is evidenced by the arguments advanced by those who are approached upon the subject, viz.: that the law will not compel one to perform an act of labor without remuneration, and there being no provision in the law for compensation they cannot be forced to act.

Be this rule erroneous or not, it prevails in the minds of the profession to a large degree, and does thereby impede the fulfillment of the law to that extent.

This fact, I think, is cognizant to each member of the Board, and will therefore militate against any effort that we might make to place before the public a greater knowledge and practice of sanitary science through that channel.

To originate and organize societies or other bodies outside of the legally organized Boards would meet with no better success, I fear, than what has obtained.

The point to be attained, I think, is the education of the community at large, the common people, upon the subject of hygiene and sanitation.

In order that we do this it is necessary that we adopt some method by which we can reach that class of society with the proper literature, and interest them in its study sufficiently to gain a knowledge of the subject aside from that now taught in the common school curriculum. If we could add an increased circulation to the Bulletin that is proposed to be issued from this office upon subjects of this nature, teaching the householders the minor principles of sanitation, such as caring for the refuse from his kitchen in such a way as not to have it distributed over his back yard, there to rot and create a hotbed for the culture of disease germs; the necessity of caring for his cellar for a like cause; teaching him that the percola-

tion of excrementitious matter from his privy vault or stable manure through the surface soil will find its way into his well if within easy reach, thereby causing dysentery, typhoid fever, etc.; that the carbonaceous matter washed out of the atmosphere and off the roof of his house may accumulate in his cistern to such a degree as to render the water therein no better than that of a cesspool, producing like deleterious effects; that pure air in his sleeping apartments is as essential to health as is pure food and water; the great necessity of guarding against contagious or infectious diseases when prevalent in the community, and the importance of thorough disinfection of all things subjected to any such virus and the best means to accomplishing the same, with many other matters pertaining to the first principles of hygiene.

I repeat, if we could add such increased numbers to the proposed circulars as to furnish for gratuitous distribution to each of the Secretaries of the Boards of Health, who would see that they were properly placed, filled with short and pointed articles of this character, we can do more to enlighten the public upon the maintenance of health than by any other means that presents itself to my mind. With further advances in the knowledge, you might add some of the more abstruse matters of the science of health, such as pertains to the life, character, habits, propagation or culture of the microscopic germs that cause disease, etc.

Such knowledge would be eagerly sought after by many who are of a scientific turn of mind, and through them, by intercourse with others, the knowledge would become general.

E. D. LAUGHLIN, M. D.

Orleans, May 10, 1897.

Moved by Dr. Davis, that the report of Dr. Laughlin be received and spread on the record.

Adjourned.

HENRY JAMESON, *President*.

J. N. HURTY, *Secretary*.

FOURTH QUARTER.

MINUTES OF REGULAR MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Sept. 3, 1897.

Regular meeting. Present: Forrest, Davis, Hurty and Laughlin.
Meeting called to order by Dr. Forrest.
Minutes of previous meeting read and approved.

REPORT OF SECRETARY FOR QUARTER ENDING JUNE 30.

Letters postal cards and documents received, 680; letters written,
317. Reports distributed, 2,500; Bulletins, Vol. 1, No. 2, 1,500.

Following is a list of the books, pamphlets and leaflets received
and duly filed:

Health Report, Denver, Col., 1896.

Statutes and Ordinances, City of Richmond.

Twenty-first Annual Report, Indiana Department of Geology.

Forty-third Registration Report, R. I., 1895.

Twentieth Annual Report, New Jersey State Board of Health.

Seventh Report, Indiana State Board of Charities.

Sixth Biennial Report, Indiana Bureau of Statistics.

Sixth Annual Report, North Carolina State Board of Health.

National Conference Association.

U. S. Experiment Station Record, Nos. 7, 8 and 9.

Bulletins Nos. 40-49, U. S. Department Agriculture.

Pamphlet, Cremation Disinfection.

Pamphlet, Sterilization, W. F. Morse, N. Y.

Pamphlet, Disinfection of Rooms After Contagious Diseases.

W. O. Wingate.

Pamphlet, Bulletin Indiana Charities and Correction.

Pamphlet, Bulletin Pasteur Institute.

Pamphlet, Chemical Survey, Water Supply, Illinois.

Pamphlet Bulletin, March and April, 1897, R. I., State Board of
Health.

Pamphlet, U. S. Public Health Reports, 20, 21, 22, 23, 24,
25, 26.

Pamphlet, Bulletin N. C. Board of Health, April and May.

Bulletin, Iowa Board of Health, May and June.

Bulletin, Ohio Board of Health, May and June.

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Annual Report, Board of Health of Winona, Minn.

Twenty-eighth Annual Report, Richmond, Ind.

Bulletin, Urg. Board of Health, May.

Pamphlet, The Hygienic Educational and Symptastic Treatment of Tuberculosis; S. A. Koff, M. D., New York.

Leaflets, Monthly Bulletin, Connecticut State Board of Health, April and May.

Leaflets, Monthly Report, Health Department of St. Louis, April and May.

Leaflets, Monthly Bulletin, New York State Board of Health; Report Department of Health, April and May.

Leaflets, Monthly Bulletin, Department of Health, Omaha, April and May.

Leaflets, Health in Michigan, weekly, by Michigan State Board of Health.

Vital Statistics, Evansville, April and May.

Leaflets, 18 in all, miscellaneous.

Water analyses made, 23. See special analytical record for information. Of the 23 waters analyzed 15 were condemned, 4 were classed as suspicious and 7 were found to be pure and wholesome.

Vinegar anaylses made, 10; cider vinegars, 2; malt, 8; under standard, none.

Diphtheria cultures examined, 11; true diphtheria, 5; false, 1; streptococcus and staphylococcus, 4; no growth, 1.

Sputum examinations, 5; bacillus tuberculosis found in 2; bacillus tuberculosis not found in 3.

The Seventh Annual Conference of the State Health Officers was held May 11 and 12. The attendance was 42. The programme as printed was fully carried out. Two of the papers read deserve special mention. They were, "Sanitary Management of Scarlet Fever," by Dr. Cox, of Owen County, and "Diphtheria in Columbus, Ind.," by Dr. George T. McCoy, of Bartholomew County.

The stenographer's transcript of the meeting is all ready for publication in our forthcoming report.

In accordance with the directions of this Board at its last meeting, the Secretary promulgated the order to all County Secretaries to send in their reports within 20 days after the end of each quarter.

According to order, the Secretary also issued Health Circular No. 7, relating to analyses and bacteriological examinations. Twenty-

four water cases like sample submitted were purchased for the purpose of properly collecting water for analysis.

Visits by the Secretary were made as follows:

May 18, Fortville, account of nuisance.

May 24, Terre Haute, Annual Meeting State Medical Society.

May 24, Michigan City, account of new water supply at State Prison.

June 3, Crawfordsville, account of schools.

June 8, Cleveland, Ohio, account of meeting of Health Officers, General Baggage Agents and representatives of National Undertakers' Association to formulate rules governing the transportation of dead bodies.

June 22, forty-first semi-annual meeting of the Delaware District Medical Society.

Glanders was reported in White County, at Monticello, June 11 and also June 21. Prompt notice was given, as the law directs, to the Live Stock Sanitary Commission.

Request from the U. S. Marine Hospital Service.—Fifty copies of the following blank were received from the U. S. Marine Hospital Service May 9, 1897, with the following letter:

TREASURY DEPARTMENT.

**OFFICE OF THE SUPERVISING SURGEON-GENERAL,
MARINE HOSPITAL SERVICE.**

Washington, D. C., April 30, 1897.

To the Secretary of the State Board of Health:

Sir—Will you kindly furnish this office, on the inclosed blanks, at your earliest convenience, mortality and (as far as possible) morbidity statistics of all towns in your State from which you have received such reports for the year ended December 31, 1896?

By direction of Supervising Surgeon-General, M. H. S.

Respectfully yours,

PRESTON H. BAILHACHE,
Surgeon, M. H. S.

TREASURY DEPARTMENT.

**OFFICE OF THE SUPERVISING SURGEON-GENERAL,
MARINE HOSPITAL SERVICE.**

Washington, D. C.,

To the Secretary of the Local Board of Health, or Local Health Officer:

Sir—I have to request that you will furnish this office, at your earliest convenience, with the following information relative to the mortality and (as far as possible) the morbidity statistics of.....during the year 1896:

Estimated population.....; total number of deaths from all causes (stillbirths excluded).....; death rate per 1,000 of the estimated population.....

<i>Disease.</i>	<i>Cases.</i>	<i>Deaths.</i>
Phthisis pulmonalis
Smallpox
Varioloid
Typhus fever
Typhoid fever.....
Measles
Scarlet fever
Diphtheria.....
Membranous croup
Whooping cough

A penalty envelope addressed to this office is inclosed for the return of this circular letter, and you are further requested to return the letter in case it is found impossible to make the desired entries in the above table, with a statement to that effect.

Respectfully yours,

WALTER WYMAN,
Supervising Surgeon-General, M. H. S.

Name of city or town.....

Reported by.....

Promptly the following day these blanks were mailed to our largest cities and towns, with a letter, as follows:

Indianapolis, May 10, 1897.

Dear Doctor—Please fill out the enclosed blank as completely as possible and return to this office at your earliest convenience. If mortality and morbid records have not been kept in your city, return blank and favor us with an account of the situation.

Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

The cities and towns reporting were:

Evansville, Richmond, Indianapolis, Columbus, Terre Haute, Ft. Wayne, South Bend, Muncie, Anderson, Union City, Seymour, Greensburg, Shelbyville, Greencastle, Huntington, Laporte, Goshen, Warsaw, Marion, Logansport, Fowler, Bloomington, Martinsville, Spencer, Washington, Vincennes, New Albany, Jeffersonville, Madison, Portland, Plymouth, Hartford City.

OPINION OF ATTORNEY-GENERAL.

The following letter of inquiry and answer to the same do not need explanation:

Indianapolis, June 8, 1897.

Hon. Wm. A. Ketcham, Attorney-General:

Dear Sir—Item eleven, of chapter CLXXXIX, acts of 1897, gives to this board twelve hundred dollars "to be applied in the prevention of typhoid fever, diphtheria, scarlet fever and like contagious diseases." The State Board of Health desires to know whether or not this appropriation is \$1,200 for each year, including 1897, 1898 and 1899?

It is necessary, in order to perform special work in suppressing contagious diseases, to have special clerical help. Does the law permit us to employ such help and pay from the special \$1,200 appropriation?

Your opinion on the above two points is respectfully requested.

Very truly yours,

J. N. HURTY, Secretary.

Indianapolis, Ind., June 9, 1897.

Doctor J. N. Hurty, Secretary, City:

Dear Sir—Answering the inquiry contained in your favor of June 8th, I beg to say that, in my opinion, the appropriation act of 1897 makes only two appropriations—one of \$1,200 for the period ending October 31, 1898, and the other for the year ending October 31, 1899.

But for the peculiar language embraced in item eleven, the first \$1,200 would not be available until after the 31st of October, 1897, but because of the language used it is presently available as needed; but it is but the one sum, and no more than that sum can be drawn, in my opinion, by the State Board of Health on that appropriation between now and the 1st of November, 1898.

I have the honor to be

Yours very truly,

WILLIAM A. KETCHAM,

Attorney-General.

The following letter and petition from Bloomington, Ind., are respectfully presented for the Board's action:

Bloomington, Ind., August 19, 1897.

Doctor J. N. Hurty:

Dear Sir—We send with this letter the petition with 112 signatures. These names were very easily secured, and more could be obtained by our holding the petition longer, but the time is now ripe for you to take action. While there is so much fever and other sickness in our city, anything that would improve its sanitary condition should now be done.

We do not know to whom you will send the order for removal, but we trust it will come clothed with so much authority that it cannot be ignored or questioned.

Respectfully,

MRS. EDWIN S. BRODIX, Secretary.

Bloomington, Ind., July 31, 1897.

To the State Board of Health:

We, the undersigned citizens of Monroe County, Indiana, respectfully petition that the hitching rack around the public square at Bloomington be removed and abolished, because the conditions it engenders are a constant threat against the public health and constitute a public nuisance.

Robert W. Miers.
 S. E. Avery.
 Martha Buskirk.
 Mrs. Eli Seward.
 E. Williams.
 Joseph Swain.
 Chas. A. Rheth.
 T. J. Marxeon.
 Wm. A. Rice.
 W. W. Vanzandt.
 Irvin Seward.
 Homer Woolen.
 R. C. Rogers.
 C. T. McPheets.
 J. F. Newsom.
 W. A. Dunn.
 R. J. Ally.
 S. R. Lyons.
 Geo. Owen.
 Louisa H. Maxwell.
 L. V. Buskirk.
 H. W. Johnston.
 Jas. K. Beck.
 S. H. Pinkerton.
 Wm. Johnson.
 C. H. Speinger.
 Nelson Joyner.
 Lou W. Hughes.
 David Hughes.
 Sigel Robertson.
 William Giles.
 Maggie A. Hodges.
 Gustaf E. Karstan.
 E. B. Cassell.
 A. A. Orr.
 Samuel B. Rogers.
 Robert C. Foster.
 D. C. Miller.
 Wm. T. Blair.
 Howard Maxwell.
 C. A. Ross.
 H. J. Nichols.
 J. W. Hubbard.
 M. H. Dogemann.

T. K. Mulky.
 W. H. Stevenson.
 L. R. Oakes.
 T. B. Willoughby.
 John Murphy.
 J. W. Adams.
 Ross Howe.
 Walter Burke.
 Wm. Farmer.
 W. P. Rogers.
 Ed. K. Young.
 E. M. Seward.
 A. J. Axtell.
 John W. Cravens.
 L. H. Jefferson.
 H. L. Hewson.
 R. R. Stewart.
 L. T. Lowder.
 R. W. Weir.
 F. C. Duncan.
 Mary A. Northcott.
 E. B. McGee.
 Robt. Marshall.
 T. W. Cung.
 E. Batterton.
 B. F. Adams, Jr.
 John Ehue.
 H. F. Perry.
 Mary Kelly.
 W. A. Rawles.
 W. H. Surand.
 Carter Penning.
 D. H. Maxwell.
 W. S. Pinkerton.
 J. C. Pinkerton.
 C. T. Robertson.
 Walter Farris.
 R. H. Strong.
 Wm. B. Hughes.
 S. P. McPhetridge.
 Leonard Whetsell.
 Thos. A. Allen.
 Rebecca D. Wylie.
 Horace A. Hoffman.

J. M. Pauley.
 James M. Matthews.
 Samuel H. Rhorer.
 J. C. Worley.
 M. G. Allison.
 John A. Hunter.
 W. O. Nicely.
 Mrs. T. J. Clark.
 J. L. Nichols.
 Albert C. Robb.

James B. Mulkey.
 W. M. Smith.
 C. W. Booth.
 John R. Stemm.
 A. C. Lawrence.
 Frank M. Graham.
 Fred S. Shoemaker.
 Claude Brant.
 H. A. Axtell.
 J. O. Hooper.

I recommend that committees for next year be appointed as follows:

1. Rules.
2. Phthisis and its Sanitary Control.
3. Public Institutions.
4. Schools.
5. a. Sanitary Control of Schools.
 b. The Teaching of Hygiene in Schools.
6. Legislation.

The rules governing the transportation of dead bodies, adopted at the last meeting of the conference of Provincial and State Boards of Health, are herewith presented for your consideration.

I recommend the following order of business for the meetings of this board:

Called to order.
 Reading of minutes of last meeting.
 Unfinished business.
 Report of Secretary of last quarter.
 Reports of committees.
 Miscellaneous.
 Adjournment.

RULES FOR TRANSPORTATION OF DEAD BODIES.

Moved, by Dr. Davis, that the rules adopted by the National Conference of Provincial and State Boards of Health at Nashville be formally adopted by this Board, and that the Secretary have the same printed for distribution.

Carried.

Ordered: That the President appoint committees as follows:

On Rules.

On Sanitary Control of Phthisis.

On Public Schools.

a. Sanitary control of.

b. Teaching of hygiene.

On Legislation.

Moved by Dr. Davis, that the following order of business be adopted and guide the board in its future meetings:

Called to order.

Reading minutes of last meeting.

Unfinished business.

Report of Secretary for last quarter.

Reports of committees.

Miscellaneous.

Adjournment.

The following resolution was offered by Dr. Davis:

Resolved, That no rule, regulation or mandatory provision that is questioned by any member of this board shall be printed or distributed by order of this board without the same having been previously submitted to the Attorney-General for his decision as to the power of the State Board of Health to enforce the same. Carried.

Dr. Davis offered the following resolution:

Resolved, That the Secretary of this board be, and is hereby, directed to issue a special order to the County Board of Health of Monroe County, Indiana, to abate the nuisance complained of and specified in a communication from said County Board of Health to the State Board. Carried.

Moved by Dr. Davis, that the board attend in a body the meeting of the American Public Health Association, to be held at Philadelphia, October 26, 27, 28 and 29. Carried.

Adjourned to meet next time at 9 a. m., on a day to be hereafter selected.

Approved.

J. H. FORREST, *Vice-President.*

J. N. HURTY, *Secretary.*

Opinions of Attorney-General.

OPINIONS OF ATTORNEY-GENERAL.

Indianapolis, Ind., July 22, 1897.

Hon. W. A. Ketcham, Attorney-General State of Indiana:

Dear Sir—In many towns in Indiana the Town Trustees have failed to organize as town health boards, have not appointed town health officers and have utterly failed to abate and remove nuisances, as commanded by R. S., 1894, Section 6718.

How shall the State Board of Health proceed to enforce the law? Is it necessary for the board in regular or extra session to call the attention of delinquent towns to their neglect and order compliance, or may the executive officer order compliance and then institute suit in event of failure to obey?

Very respectfully,

J. N. HURTY,
Secretary.

Indianapolis, Ind., July 22, 1897.

Doctor John N. Hurty, Secretary State Board of Health:

Dear Sir—You report that in many towns the trustees have failed to organize as town health boards, as provided by R. S., 1894, Section 6718.

The proper method of procedure in such case is for the State Board of Health, at a regular meeting, to notify offending boards of trustees to organize as boards of health within a certain time, and in case, on expiration of the time, the organization has not been effected, mandamus proceedings could be instituted by the State Board of Health against the town trustees.

While it is not necessary to notify the town trustees, I think it would be only fair to give them such notice.

I have the honor to be,

Yours very truly,

W. A. KETCHAM,
Attorney-General.

Indianapolis, Ind., January 14, 1897.

Doctor J. N. Hurty, Secretary State Board of Health:

Dear Sir—You ask, "Does the present Health Law confer upon this board the power to establish and maintain quarantine in cases of malignant and contagious diseases?"

In Section 6716, R. S., 1894, the State Board of Health is given "the general supervision of the health and lives of citizens of the State." In Section 6718, the county and other subordinate boards of health throughout the State are required "to protect the public health by the removal of causes of disease when known, and in all cases to take prompt action to arrest the spread of contagious diseases," and "to perform such other duties as may from time to time be required of them by the State Board of Health pertaining to the health of the public." Section 6719, in specifically prescribing the duties of local boards, provides that "it shall be the duty of county boards of health to promulgate and enforce all rules and regulations of the State Board of Health in their respective counties which may be issued from time to time for the preservation of the public health and for the prevention of epidemic and contagious diseases."

If, in the opinion of the board, the establishment and maintenance of quarantine is necessary for the preservation of the public health and the prevention of epidemic and contagious diseases, there can be little doubt of the right of the State Board of Health to order it and of the duty of the county boards of health to enforce it.

Respectfully submitted,

W. A. KETCHAM,
Attorney-General.

Brookville, Ind., July 28, 1897.

Mr. Ketcham, Attorney-General of Indiana:

Dear Sir—You will excuse me for taking a little of your time, but I wish to ask you a few questions in regard to the laws governing the County Board of Health:

1. Should a doctor fail to report a death or birth, what is the penalty, and how soon after the birth or death has the doctor got to make said report in?

The law of 1885 says 15 days; the law of '91 repeals that law and sets no time. As Secretary of the Board of Health, I have some doctors that will not make any reports, saying there is no law to compel them to, and that the law does not fix any time for them to make a report in.

2. What is the time given to make a report of contagious or infectious diseases; also the penalty for neglect of the same?

Section 10 of acts of 1891, page 18, does not state that such diseases shall be reported.

Hoping that you will grant me your opinion in full as soon as possible, I remain,

Yours truly,

JAS. F. WEST, M. D.,
Secretary Franklin County Board of Health.

INDIANAPOLIS, IND., July 29, 1897.

James F. West, M. D., Brookville, Ind.:

Dear Sir—I have your favor of the 28th. Ordinarily I refer these communications to the State Board of Health, so that they may be answered by them. I find that it is better to have all questions referred to and answered by the proper departments, and in that way the system can be better maintained. If part of them are answered by myself and part by the particular department in which it belongs, there are liable to be some discrepancies or interferences. I find, upon inquiry, however, at the office of the Board of Health that Dr. Hurty is out of the city, and I therefore beg to say that Section 14 of the act of 1891 (Acts of 1891, p. 19) prescribes the penalty for violation of the act at a fine of not to exceed \$100.

While the act of 1891 does not, in terms, name the time within which the return should be made, Section 10 provides that it should be done on the forms furnished, and the State Board is required to prescribe the forms, etc., and I think it ought to be done within fifteen days.

The repealing clause of the act of 1891 repeals all laws and parts of laws in conflict with it. As to the time within which it should be done, there is nothing in the act of 1891, as it seems to me, in conflict with the act of 1885, and therefore that portion of the act of 1885 is still in force.

Under the act of 1891 large powers are conferred upon the State Board of Health, and they are required under Section 6 to make sanitary investigations and inquiries, etc., and under Section 12 to furnish blanks required for the gathering and reporting of sanitary and vital statistics, etc. If that Board has, by its rules, adopted and made provision for the reporting of contagious and infectious diseases, it would be difficult to say that there was no requirement. If they did, then I think the rules that they have made would be

binding upon physicians, and the penalty prescribed in Section 14 would be recoverable from any physician who refuses to comply with their orders.

Yours very truly,

W. A. KETCHAM,
Attorney-General.

Circulars Issued During the Year.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Jan. 5, 1897.

Dear Sir—We address you upon a matter of great economy to the State. There is annually lost in Indiana not less than \$5,000,000.00 through unnecessary disease and unnecessary death. It is earnestly proposed that this great sum be saved. This may be done by the Legislature if it will pass a proper health law. A bill has been carefully and studiously prepared for the consideration of the coming General Assembly. Its first clause puts the present Board of Health out of office, and so it is plain that self-seeking does not prompt this movement. The major portion of the bill has been drawn from the health laws of Massachusetts, New York, Michigan and Pennsylvania. These States have, through their health laws, gained much wealth and power. Why may not Indiana do likewise? The old law is inefficient and not up-to-date. It does not take account of recent discoveries in Sanitary Science and fails to meet many conditions necessary to accomplish thorough health work. It may be likened unto an old wheezy engine that coughs and groans as it hauls its insignificant load. The State Board of Health does not come as a suppliant; it simply gives information that the disease and death annually known in Indiana causes enormous losses in money to the State; that much of this disease and death is unnecessary, and that a proper health law will, through prevention, save more money each year than is required to run the State government.

Very respectfully yours,

STATE BOARD OF HEALTH.

J. N. HURTY, *Secretary*.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, April 14th, 1897.

HEALTH CIRCULAR No. 7.—FREE ANALYSES AND BACTERIOLOGICAL EXAMINATIONS.

The State Board of Health is now prepared to make, free of charge, under the conditions herewith set forth, sanitary water analyses, food analyses, bacteriological examinations for the diagnosis of diphtheria, phthisis and typhoid fever.

This work will only be done when the same is made of record by County, City or Town Health Officers, and when said work will be for the public good.

Any physician, upon application to the State Board, will have promptly sent to him, free of all expense, outfits, with blanks, for sanitary water analyses, diphtheria cultures and blood examinations for typhoid fever diagnosis. Sputum may be sent by mail in securely corked vials. Provided, said applicant will give, in writing, an accurate account of the circumstances which led him to have the work done; and provided, also, that he will carefully fill out the blanks furnished him in duplicate, sending one to the Secretary of the County Board of Health and one to the Secretary of the State Board.

Because of exhaustion of appropriation, or for any other cause which the State Board may consider sufficient, any or all analyses and examinations will be refused.

By order of the State Board of Health,

H. JAMESON, *President.*

J. N. HURTY, *Secretary.*

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, April 14, 1897.

HEALTH CIRCULAR No. 8.

To Secretaries of County Boards of Health:

At the regular meeting of the State Board of Health for the quarter ending March 31, 1897, the following order was issued, which is self-explanatory:

"Ordered: The Secretary shall inform all Secretaries of County Boards of Health that from this date said Secretaries shall send to this office their quarterly reports within twenty days after the end of each quarter. If any of the County Secretaries fail to so report, the Secretary of the State Board of Health is hereby ordered to report their failure to their respective County Boards of Health, with the request that said delinquent County Health Officer be removed on account of failure to perform his or her duties."

It is suggested that County Secretaries have printed and distribute a circular letter to each practicing physician in their respective

counties, calling attention to the statute as appears in R. S. 1894, Section 6720, which says: "It shall be the duty of all physicians and accouchers in this State to report to the Secretary of the Board of Health of the town, city or county, in which they may occur, all births and deaths which may occur under their supervision, with a certificate of the cause of death, and such correlative facts as may be required in the blank forms, furnished as provided in this act." The penalty for the violation of this act is found in Section 6724: "Any person or persons, or the officers of any corporation, who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not exceeding one hundred dollars."

The law is plain and unmistakable, and that it can be enforced and that it is the duty of health officers to enforce it, is plain from the following opinion of the Attorney-General:

Sir—The duties imposed by this statute, and the penalty for its violation, are within the police power of the State, and the statute is valid and constitutional. (*Robinson v. Hamilton*, 60 Iowa 134; 46 Amer. R. 63.) In the case of *Robinson v. Hamilton*, supra, which was an action for a penalty against a physician for his failure to render a report of a death or birth, as requested by the State Board of Health, the court says: "It is proper to remark that under the statute brought in question, the defendant may be required to report the information sought in the manner prescribed by the Board of Health. The statute requires the collection of statistics pertaining to the population of the State and the health of the people which may impart information useful in the enactment of laws and valuable to science and the medical profession, to whom the people look for remedies for diseases and for means tending to preserve health. The objects of the statute are within the authority of the State, and may be attained in the exercise of its police power. Similar objects are contemplated by statutes requiring a census to be periodically taken, the constitutionality of which we have never heard questioned. We need not inquire whether the provisions of the statute are unjust or oppressive. These matters are for the consideration of the legislative department of the government. We may observe that it is difficult to discover oppression or injustice in requiring the medical profession to make known to the world statistics which may promote and are promoting the public health. A physician should honestly endeavor to obtain and report all information required by the regulations of the statute and the Board of Health. This is his duty as a surgeon, and is imposed as an obligation by the ethics of the useful and honorable profession of which he is a member. The statute confers on a physician certain privileges, and may impose corresponding duties."

Respectfully,

FRANCIS T. HORD,
Attorney-General.

County Secretaries should know that all city and town health officers are subordinate under the statute to the County Boards of Health, and that they have the power and right to compel from all city and town health officers, in their respective counties, prompt and complete reports.

In the special notice to physicians concerning the determination of the State Board to secure more perfect vital statistics, it may be well to state that prosecution will surely attend all failures to obey the law.

By order of State Board of Health.

H. JAMESON, *President.*

J. N. HURTY, *Secretary.*

OFFICIAL CIRCULAR.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Aug. 16, 1897.

It is a fact that the opening of the schools every fall is accompanied with an increase in many diseases. It is mostly the so-called children's complaints, such as whooping cough, diphtheria, scarlet fever and measles that appear to so unusual an extent. The reasons for this are not far to seek, it being well known that dirty school-houses and the coming together of the infected few with many who are susceptible almost wholly explains the phenomenon.

The State Board of Health has statistics which warrant the statement that about 200 unnecessary deaths, and from 1,500 to 2,000 cases of unnecessary sickness follow upon the opening of the schools. Not to prevent this awful condition, when prevention is possible, would be wicked. We shudder with horror at the stories of the car of Juggernaut, and we must not continue to view unperturbed the terrible destruction caused by our unscientific conduct of the schools. You are therefore instructed to formally bring this matter before your Board and urge the adoption and promulgation of the enclosed order. That part of the order relating to separate closet or privy facilities for the sexes can not be too much emphasized. Many children, especially girls, are permanently injured in bowels and bladder on account of being compelled to retain secretions because of lack of decent separate privies.

You will probably meet in this work with the strange and ignorant argument that "all now living have survived the conditions

it is proposed to remove, and therefore it is unnecessary to do anything." Such reasoning is not less foolish than the statement that inasmuch as thousands have escaped injury in battle, therefore bullets are not dangerous. To those Secretaries who recoil from their work, saying "I am not sufficiently paid," we say, you have probably sought, you certainly have accepted, your present office, and it is clearly your duty to perform its functions as laid down in the statutes regardless of the sum you have contracted to do it for.

You will please report promptly to this office what action is taken in your county. The counties acting shall be fully credited in the next report of this Board.

Very sincerely and respectfully yours,

J. N. HURTY, *Secretary.*

[This form is recommended:]

.....COUNTY BOARD OF HEALTH,
.....1897.

HEALTH ORDER.

All School Commissioners, School Trustees, in cities and towns, and Township Trustees in the county of.....shall, before the opening of the school or schools under their respective care, thoroughly renovate the schoolhouses and schoolrooms.

Renovation shall consist, first, in making such repairs to the house and furniture as may be necessary; second, in cleaning with lye-water and soap, floors, desks and woodwork which were in use the past year; third, in revarnishing desks and repainting woodwork where this has not been done for two or more years; fourth, in supplying abundantly and properly pure drinking water; fifth, in furnishing separate closets or privies for the sexes, which shall be clean and decent in every respect; sixth, in providing proper heating apparatus, which introduces to the schoolroom outside air, which it heats, and evenly distributes; seventh, in supplying to the windows dark shades which roll up from the bottom, that light may be admitted over the heads of the pupils, thus preventing injury to eyes.

Failure to comply with this order will be followed by the proper legal processes to compel compliance.

By order of.....County Board of Health.

.....*President.*

.....*Secretary.*

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Sept. 11th, 1897.

Dear Doctor—Please answer the following questions as soon as possible and return this sheet to this office. Thanking you in advance, I am,

Very truly yours,
SECRETARY STATE BOARD OF HEALTH.

Have the diseases of the air passages increased since the advent of natural gas?

Do you think the use of natural gas can be in any way productive of diseases of the air passages?

How many deaths in your county from diphtheria and membranous croup in 1890 1891
1892 1893 1894
1895 1896?

Secretary.....County Board of Health.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Oct. 16, 1897.

Dear Doctor—On September 2 we addressed a letter to you concerning the sanitary condition of the school houses. In it we urged that certain steps be taken by your County Board of Health and that you would please forward the matter all you could. We also asked that you reply to us upon the subject. Not having heard from you, and as the time approaches for handing in our Annual Report to the Governor, we most respectfully ask again that you let us know officially what has been done concerning this matter by you and your board.

Very truly yours,
SECRETARY STATE BOARD OF HEALTH.

OFFICE INDIANA STATE BOARD OF HEALTH,
INDIANAPOLIS, Oct. 20, 1897.

Dear Doctor—We desire for publication in our Sixteenth Annual Report a succinct account of health conditions in your county for

the year ending September 30, 1897. Please, therefore, write a letter to this board giving a description of the sanitary condition of your county poor house, court house and jail. If sanitary improvements are needed, set them forth plainly. From the County Superintendent of Schools secure an account of the sanitary conditions and needs of the school houses, and incorporate his statements in your letter. If any town or community in your county has had any epidemics or unusual ill health, give an account of the matter. Do not neglect to fully set forth the facts and figures in regard to typhoid fever, diphtheria, scarlet fever, smallpox and cerebro-spinal fever. In each instance give the cause of the outbreak when known, and the means employed to stamp it out and prevent its spread.

If hog cholera or other disease has been epidemic among animals, make an account of the same.

Do not fail to mention the degree of prevalence of phthisis.

We earnestly hope you will make prompt and full reply to this letter, writing only on one side of the paper, for it is to be published.

Very respectfully yours.

SECRETARY STATE BOARD OF HEALTH.

OFFICE INDIANA STATE BOARD OF HEALTH,

INDIANAPOLIS, Oct. 25, 1897.

Dear Doctor—Please return to us on this sheet the cities and towns in your county and the names of their health officers, if they have any. Do not omit names of any cities or towns.

J. N. HURTY, *Secretary*.

County.....

Cities.....

Towns.....

REPORT OF THE STATE BOARD OF HEALTH CONCERNING CERTAIN SANITARY NEEDS OF THE STATE PRISON NORTH.

JANUARY, 1897.

WATER SUPPLY.

All the water used in the prison is obtained from shallow wells within the walls. Twelve driven wells, each "about thirty to forty feet deep," supply water to the boilers which furnish all the steam for the institution, and also fill the pipe system throughout the buildings. These wells are about 300 feet distant from a large sink which for many years received the contents of the cell buckets. Experience has proved this water to have a corrosive action on steel and iron, and also to produce stomach and bowel disorders when used for drinking. The following analyses of the samples taken January 23, 1897, condemns this water utterly for either steam making or drinking:

PARTS IN 100,000.

Appearance—Contained a great deal of dirt and flocky matter, besides a little very fine sand.

Odor when warmed to 100°F.—Faintly musty.

Chlorin in chlorids	28.4
Nitrogen as free ammonia	0.015
Nitrogen as albuminoid ammonia.....	0.080
Nitrogen as nitrites.....	0.156
Nitrogen as nitrates.....	0.000
Total solids	97.60
Organic and volatile	21.32
Hardness, Clark degree.....	14.

These data, together with observations of the deportment of the water in the process of analysis, enable me to state positively that it is badly polluted, probably with human excrement. The very large amount of solid matter contained, with its magnesium chloride, nitrates and iron, tells of strong corrosive action on iron and steel when used for steam making. It is an extravagance to use this water in boilers because of its destructive action, and for drinking it is too horrible to think of.

The drinking water for all the prisoners is obtained from two shallow wells, neither over 70 feet deep, one in the north, the other in the south cellhouse. A sample from the south cellhouse well, taken January 23, 1897, shows as follows on analysis:

PARTS IN 100,000.

Appearance—Clear and bright.

Odor when warmed to 100° F.—Faint.

Chlorin in chlorids	7.4
Nitrogen as free ammonia.....	0.037
Nitrogen as albuminoid ammonia.....	0.016
Nitrogen as nitrates	0.87
Nitrogen as nitrates	0.000
Total solids	59.2
Organic and volatile	9.6
Hardness, Clark degree	10.6

Opinion: This water is polluted and is not potable. Its constant use, excepting by the very strong, will cause more or less derangement of the stomach and bowels. Condemned.

It is not surprising that water from shallow wells, driven in sandy soil within an area of eight acres, containing a great excrement sink, and which has been constantly inhabited for 30 years by hundreds of men, should furnish polluted water.

THE HOSPITAL.

It consists of four rooms immediately above the kitchen, where cooking commences at 4 o'clock a. m. and continues until 7 p. m. The noise and odors bring great discomfort to the sick and seriously hinder recovery. Four rooms on the second floor in the rear of the chapel compose this department of the prison. The rooms are in line with each other. The north one is used for office, operating and drug department, the middle ones for wards, and the fourth, at the end, divided by a partition, makes the kitchen and dining room. The floors are of soft pine, of very poor quality, impossible to keep clean, and have lately sunk some seven inches on account of miserable buildings. The side walls are dirty and dingy, the plastering being thin and poor. The plastered ceiling has fallen in several places on account of a leaky roof. The water closet and bath room is simply a stall formed by a thin board partition in a corner of one of the wards. The bath tub is iron, un-

glazed, rusty and impossible to clean, the closet apparatus is an old, out-of-date hopper, without efficient trap, and of a kind that sanitary science has always condemned.

The situation of the bath tub and closet in the corner of the room, with their faulty construction, filling the ward with sewer gas and repulsive odors, is, putting it mildly, a barbarism. So, also, it is barbarism to keep men differently afflicted in the same apartment. It obviously would be wrong to hold smallpox and other patients in the same room of a hospital, but it is not less wrong to compel men sick with an acute disorder to remain in a room containing a number of consumptives. The probability of acquiring consumption under such conditions is very great; in fact, there is hardly a chance of escaping this incurable disease under such circumstance. So limited is the capacity of the present hospital that about one-half of the sick are treated in their cells. The prison hospital should be without the walls, removed from the noise, confusion, smoke and dust of the shops, solidly and permanently constructed, arranged conveniently and in every way built in conformity with sanitary laws.

CLOSETS AND URINALS.

The present closet facilities in the shops and over the whole prison are a reproach to civilization. They are almost too repulsive to describe, being condemned by the commonest decency and cleanliness. No hope of reforming any man compelled to use such arrangements could be rationally entertained. A sufficient number of flush closets of proper sanitary construction, with sewer connection, should be provided in convenient places in all the shops and buildings.

VENTILATION.

The ventilation of the cell houses and the cells is very imperfect and should be remedied without delay. Forced ventilation should be adopted. The small air shafts proceeding from each cell and the conduits leading from the bucket boxes do not work. If the large air shafts, to which the small ones from the cells lead, were exhausted by fans or other mechanical means, and if each cell house was provided with large ventilators in the roofs, pure air in proper proportion could be furnished.

RECAPITULATION.

Economy and health demand a new water supply, for the present supply corrodes steel and iron, causing great expense for repairs, and, being polluted, is unfit for drinking.

The present hospital is really a pesthouse situated over a kitchen. The materials of construction and arrangement forbid proper cleanliness and disinfection, and in consequence contagion clings to every square inch of walls and floors.

The commonest decency demands that proper closets and urinals be provided.

The ventilation of the cell houses and cells should be made perfect.

Respectfully,

STATE BOARD OF HEALTH,

By the Secretary.

Visits in Response to Requests.

VISIT TO ANDERSON.

Dr. J. F. Ginn, health officer of Elwood, Madison County, having given information concerning the failure of certain physicians of his city to report cases of diphtheria, and as they openly declared they would not make reports, it was concluded to institute legal proceedings against them. Accordingly, the Prosecuting Attorney of Madison County, Mr. D. V. Scanlin, was called upon and made acquainted with the situation. He concluded to warn the delinquents and to make prosecution if the offense was repeated. While at Anderson the Secretary, together with Dr. Chittenden, county health officer, made a sanitary survey of source of city water supply.

Said supply is taken direct from White River. About 1,000,000 gallons of water are pumped daily. The drinking water of the city is obtained from wells, the river water being used for all other purposes.

There was not a case of typhoid fever in the city at the time of the visit, and only one had been reported in the quarter preceding. As Anderson uses the vault and sink system for the disposal of sewage and gets all drinking water from wells, it is only a question of time until typhoid fever will become more prevalent. Diarrhoea and other bowel disorders will, of course, increase, as will also stomach troubles.

It is to be hoped that the city may be induced to immediately adopt the sanitary conditions which will forever keep typhoid away.

March 10, 1897.

STOCK YARDS NUISANCE AT FORTVILLE.

Dr. A. A. Stuart, Health Officer at Fortville, called at the office of the State Board of Health on May 17, 1897, and complained that the stock pens of the C., C., C. & St. L. Railway at his town had become a nuisance. Two petitions to the Fortville Health Board, signed by 72 citizens, were submitted. Said petitions asked for relief from the "unbearable stench" and "other offensive conditions."

It was thought best to apply to the railroad for relief before official notice to abate or suit was threatened. The Secretary of the

State Board, therefore, called upon Mr. J. Q. Van Winkle, Superintendent, informed him of the situation and immediately received his promise to remove the pens, or, if practicable, clean them to the satisfaction of the Health Department. A visit of the State Health Officer to Fortville and an inspection of the nuisance was made May 18th. The pens did not at the time contain any animals. They were very dirty, containing hog wallows and much accumulated manure. They were uncovered, and so on hot days it was necessary to allow streams of water to continuously flow upon the ground to prevent hogs from dying. The water cooled the animals, but caused a filthy condition. "Slopping" the hogs, which consisted in spreading salted shorts upon the ground and adding water, had increased the filthiness.

Hogs were occasionally sold by the shippers to butchers, and the latter killed and stuck them immediately without the pens. The blood formed pools, putrified and added to the nuisance. To permit this slaughtering at the pens was a neglect of the town marshal, and his attention was called to the fact. The Town Health Board was directed to clean and disinfect the blood pools and abate bad mud holes near by. The following letter to Mr. Van Winkle tells what was required of the railroad:

Indianapolis, May 18, 1897.

Mr. J. Q. Van Winkle, General Superintendent C., C. & St. L. R'y. Indianapolis:

Dear Sir—According to our understanding of May 17, I went to Fortville to-day (Tuesday) and investigated the complaint of the authorities and citizens of Fortville against the stock pens of your railroad at that point. As you know, these pens are within the town, and several dwellings are close by. The householders complain of filthiness of the pens and the stench arising therefrom.

Our survey discovers that the pens are in bad sanitary condition, not having been cleaned for a long time. On account of being open to the sun, it is necessary in hot weather to have a constant stream of water run upon the ground to "cool the hogs" and "keep them from dying." This makes wallows and increases the filth and bad odors.

Through the neglect of the town authorities, butchers have been permitted to slaughter hogs at the pens, and pools of blood are thus formed, which decay and induce conditions inimical to health. The town marshal will hereafter prevent this slaughtering and the Health Officer will clean and disinfect the blood pools. On your part the State Board of Health requires that the pens be in part or whole shedded, thus protecting the animals from the sun and doing away with the necessity of the running

water, which makes the filthy wallows; that the entire area of the yards be cleaned of their accumulated filth and that the present wallows be filled with cinders or gravel.

It is recommended that the fencing be whitewashed, for the double purpose of cleanliness and neatness.

This board further requires that these pens shall be kept clean, and recommends that orders be given to the section hands or other employes that the grounds shall be raked and the accumulations carried away weekly during the spring, summer and fall months.

A ready compliance on the part of the railroad company with the above rational and proper requirements is earnestly hoped for by this board.

Respectfully,

HENRY JAMESON, President.

J. N. HURTY, Secretary.

INDIANAPOLIS, May 22, 1897.

H. Jameson, M. D., President State Board of Health:

Dear Sir—In compliance with yours of the 18th, I will give the stock pens at Fortville, Ind., immediate attention.

Yours truly,

J. Q. VAN WINKLE.

All the difficulties complained of above are now (June 14, 1897) reported as abated.

FORTY-EIGHTH ANNUAL MEETING OF THE INDIANA STATE MEDICAL SOCIETY.

TERRE HAUTE, MAY 20-21.

The Secretary attended this meeting, representing the State Board. There was a good attendance, 288 members registering. There were 41 papers on the programme and five sessions. All of the papers were either read in full or by title. The occasion was admirable for the advancing of the health interests of the State with the medical profession, and it is hoped that much good was done by the Secretary in the cause.

It was not difficult to influence the association to add to its committees one on hygiene and sanitary science. President Wishard appointed on the committee D. C. Ramsey, North Vernon; James T. McCoy, Columbus, and J. N. Hurty, Indianapolis.

The duty of the committee is to report to the Society progress in hygiene and sanitary science, especially in regard to Indiana, and

to make such recommendations as may seem proper. The following members and secretaries of county, city and town boards of health were present: E. D. Laughlin, Carl Proegler, Jas. T. McCoy, N. D. Cox, S. N. Voris, J. H. Ford, Jas. Hibbard, R. W. Hawkins, A. A. Washburn, O. M. Keys, A. R. Burton, A. W. Morris, H. J. Hall, J. W. Bates, Jas. R. Willis, J. O. Jenkins, J. N. Hurty.

THE FORTY-FIRST SEMI-ANNUAL MEETING OF THE DELAWARE DISTRICT MEDICAL SOCIETY.

The above meeting was held at Muncie, Tuesday, June 22, 1897. The Secretary attended to further public health affairs so far as possible. There was a large attendance, over 50 physicians being present. The papers were read and discussed. All were concerned with curative medicine or surgical repair. The President's address mentioned the word prophylaxis once.

State medicine will receive attention at the next meeting.

The following Health Officers were in attendance: F. H. Hodges, Anderson; W. J. Fairchild, Anderson; H. A. Cowing, Muncie; S. M. Reid, Muncie; J. N. Hurty, Indianapolis.

CROTHERSVILLE—SANITARY CONDITION.

On June 14, 1897, the following petition was received:

CROTHERSVILLE, IND., June 14, 1897.

State Board of Health, Indianapolis, Ind.:

Gentlemen—We, the undersigned, hereby respectfully call your attention to the sanitary condition of this town, and ask you, in the name of our people, to at once investigate the matter. Numerous petitions have been filed with the Town Board, but have been ignored, hence we appeal to you, and shall expect immediate action on your part before the summer heat shall have spread disease and death among our people. The nuisance we complain of is a railroad stock pen situated near the center of town, a creamery and cheese factory and numerous hog pens and filthy privies, and as our Town Board refuses or fails to act in the matter, we appeal to you, gentlemen, to act at once or give us a reason for not doing so. Address or call upon either of the subscribers to this letter.

Believing that it is your duty to look after matters of this kind and that you will at once investigate this particular case, we beg leave to subscribe ourselves,

Your obedient servants,

Wm. H. Warner, M. D.

James Rodenburg.

Anna Badger.

A. G. Britz.

Chas. Ritz.

F. E. Patrick.

G. Amus.

Wm. C. Dally, Town Attorney.

John Warman, Marshal.

C. L. Badger.

Henry Kottman, Brownstown.

Lawrence Easnour.

John Krouse.

M. M. McCoy.

Wm. Hawn.

Fred Kovernor.

A. L. Cox.

Geo. W. Bard.

CROTHERSVILLE, IND., July 10, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—Enclosed please find petition of citizens of the town of Crothersville, praying relief, etc.

The history of the matter is briefly this, to wit: In 1893 the town suffered a severe epidemic of typhoid fever for three or more months, caused or brought about from the filthy condition of the town. Petition after petition has been presented to the Town Board and Board of Health of Town and County, also to the Town Marshal and to the officers of the P., C., C. & St. L. R. R. Co., without avail, all having promised to act, but up to present have failed to do so. Last year the railroad people promised to keep their stock pen clean, which they have not done, except in the following manner: Simply filled up the water holes where the stock was sluiced, thus making a hotbed of stench and disease, the pen being filled with mixed stock from one to four days each week.

In the matter of the creamery, the slops from same are poured into the ground by the roadside and allowed to run down the side and across the public highway, the stench therefrom being so great that even horses shy and frighten thereat.

These are facts that can be verified and are certainly a disgrace to a civilized community, and if the Board of Health of the State of Indiana is not a farcical matter, we shall expect immediate action and relief.

Very respectfully submitted,

WM. H. WARNER, M. D.

P. S.—Among the petitioners are Mr. A. G. Ritz, ex-Town Trustee, also one of the present Trustees; Mr. Fred Kovernor and W. G. Bard, ex-Town Attorney; Wm. C. Dally, present Town Attorney, and John Warman, present Marshal.

W. H. W.

INDIANAPOLIS, June 16, 1897.

Doctor W. H. Warner and Others, Crothersville, Ind.:

Gentlemen—Your petition has been received and due notice taken thereof. The Secretary of the State Board will visit your town in about ten days, and will do all that is possible to improve the sanitary conditions.

Respectfully,

J. N. HURTY.

Secretary.

On July 15 the Secretary visited Crothersville and called upon Dr. Warner, who kindly ordered his horse and buggy and drove over the town, concerning which it is to be said: The town is situated upon level ground, is composed almost entirely of frame buildings, the business blocks usually being brick; population, about 500. A few of the streets are graveled for a short distance, the greater portion being dirt. Sidewalks are mostly planks and dirt, being brick and gravel in places in the business portion of the town. The water supply is entirely from wells and cisterns; garbage is thrown into alleys, into barrels and boxes, and in instances fed to pigs in sties within the back yards; all the sties inspected were very filthy and malodorous. Excrement is disposed of in privies with vaults; sometimes, however, the privies are built without vaults, the excrement being received upon the ground. In passing through the alleys it was discovered that all but two of 46 privies were filled and running over. They, of course, were noisome, and the repulsive odor was always present. This odor was also occasionally discovered upon the streets. The school house is a two-story brick, and is in the west center of a barren lot which is overgrown with weeds. The privies are four in number, two brick and two frame. The brick ones have vaults; the frame ones are simply upon the ground. All are in an abominable condition, being out of repair and noisome. They stand on different sides of the school lot, facing each other, no screens in front, being conspicuous objects from every direction. West of the town is a creamery, which is not sanitarily conducted. The odors proceeding from it are abundant and repellant, and are perceptible quite a distance away. The creamery is without drainage. The water and slops fall into a noisome pool six or eight feet in diameter, which lies immediately against the brick foundation of the structure. A ditch leads from this pool, but does not effectually drain it. To one who has visited this place it is nauseating to think of eating dairy products proceeding therefrom. The J., M. & I. R. R. maintains stock pens within 50 feet of the station, which is in the west central part of the town. These pens at the time of the inspection were empty, unclean and malodorous. The town trustees are Henry Murphy, Wm. Folte, Frederick Kovernor.

They have failed to obey the statute (R. S. 1894, Section 6718), which commands that a town health officer be appointed at their first meeting in December each year, there being no health officer at this

date. They have also failed to obey other parts of the above section, which declares it "the duty of town trustees to protect the public health by the removal of causes of diseases when known, and in all cases to take prompt action to arrest the spread of contagious diseases, to abate and remove nuisances dangerous to the public health."

The petition quoted, and also the Secretary's survey, show that nuisances dangerous to the public health exist at Crothersville; that the town trustees have not organized as a town health board, and have not appointed a secretary and health officer.

The Secretary called upon each member of the Town Board and urged an immediate compliance with the law and that the town be thoroughly cleaned. The President, Mr. Murphy, said they might do so at their meeting next month.

The Secretary, therefore, after waiting a reasonable time, wrote to Dr. Warner, asking if any move by the Town Board to obey the health law had been made. The following answer was received:

CROTHERSVILLE, IND., —, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—According to request, I undertake to inform you at present here in regard to stock pens, etc.

I have not heard of the Trustees making any move toward appointing a Health Officer or anything else.

I inquired of Mr. Governor to-day if anything was being done by the Board of Trustees, and he said no, and told me to tell you he would aid you all he could. The Pennsylvania Railroad Company sent one of their attorneys here last Saturday to view the stock pens. He called on our Town Attorney and also on myself, and informed others (and myself) that if compelled to move the said pens they would remove them from the town (in other words, abate the station as a stock-shipping station). I told him, as did our attorney, that it made no difference to us, as it was their affair to abate their nuisance. He claimed it was not a nuisance, and said they would shed the north end of the pen. He also claimed that stagnant pools of water were not unhealthy, and cited the City of Jeffersonville to prove it.

I await your instructions.

Respectfully yours,

W. H. WARNER.

Upon receipt of the above letter the Secretary sent the following notice:

INDIANAPOLIS, August 6, 1897.

Town Trustees of Crothersville, Ind.:

Upon petition of eighteen citizens of your town, the State Health Officer made, on July 15, 1897, a sanitary inspection of Crothersville, with the following results:

Filthy and noisome privies were found in all parts of the town. Their repellant odor was always present in the alleys and sometimes was noticed upon the streets. A stock pen owned by the J., M. & I. Railroad is near the station, well within the region of dwellings. This pen is unsanitary and offensive, threatening the public health.

On the western border of the town is a creamery that is unsanitary and offensive, also threatening the public health. Bad odors proceed from this creamery, and the drainage therefrom is wholly inadequate and improperly arranged. The school house is unclean and sadly needs renovation; its conditions are not conducive to the health of the pupils. The outhouses at this school house are in a bad state of repair, are unshielded by screens and are noisome. You have neglected to obey the law (R. S. 6718) in not having appointed a city health officer, and in not "abating and removing nuisances dangerous to the public health."

Crothersville has in the few last years suffered from typhoid fever and other filth diseases, proceeding no doubt from the conditions above described.

In the light of all this, you are respectfully requested to immediately organize as a town health board, appoint a competent secretary, who shall be town health officer, and instruct him to abate all unsanitary conditions, giving him all necessary legal and pecuniary support. We are legally advised to say that this request must be complied with by August 15 or suit will be commenced to compel enforcement of the law.

J. N. HURTY,

Secretary Indiana State Board of Health.

As no response was received from the Town Board of Crothersville to the above notice, a letter to the Town Attorney, Mr. Wm. C. Daily, inquiring what health ordinances were in force in Crothersville and what had been done since the notice was served, brought forth the following reply:

CROTHERSVILLE, IND., Aug. 15, 1897.

Secretary Board of Health:

Dear Sir—The following law is the only thing mentioned in the city ordinances relating in any way to the sanitary condition of our town:

Article I, Sec. 10. The Secretary of the Board of Health of said town shall receive as compensation for his services as such the sum of one, dollar per year.

Art. II (relating to nuisances), Clause 12. To suffer any water or putrefying vegetable or animal matter, or other nauseous or offensive thing, to be or remain in a cellar, or any house, or any lot or premises.

Clause 13. To cast or leave exposed in or on any public way or watercourse any dead carcass, any putrid or unsound vegetable matter, or any filthy or offensive matter whatever.

Clause 14. To keep any hog or other animal in a pen without such pen being cleaned thoroughly once a week, between the first of April and the first of November each year; and without such pen being kept at all times in such condition that no offensive stench will arise therefrom.

Clause 15. To keep any privy or other outbuilding in a filthy condition, so that an offensive smell will arise therefrom to the annoyance of others.

Clause 16. To cast or place, or cause to be cast or laid, any shavings, ashes, cinders, dung, dirt or other filth in any of the streets or alleys of said town without permission of the Board of Trustees.

The fine for disobeying any of the above nuisances is \$2.00 for the first offense, \$5.00 for the second and \$10.00 for third or any subsequent offense.

After viewing the above please make some suggestions as to laws relating to health, etc., and I will endeavor to have your ideas incorporated into laws. Yours respectfully,

WM. C. DAILY,
Town Attorney.

On August 20th personal inquiry at Crothersville elicited the information that a town health officer had been appointed and the sanitary needs of the place were being carefully looked after.

SANITARY CONDITIONS AT LAKE MAXINKUCKEE.

The following resolution from the Maxinkuckee Association was received June 30, 1897:

INDIANAPOLIS, IND., June 25, 1897.

Whereas, It has come to the attention and knowledge of the undersigned, cottagers at Lake Maxinkuckee, Indiana, that it is becoming customary on the part of numerous cottagers, and especially of the Culver Military Academy, to empty sewage and other effete waste matter into the waters of said lake, polluting the same, to the detriment and endangering of the health of all living on or near the borders of said lake; and of allowing the decay of vegetable and other waste matter to occur on the surface of the ground surrounding said lake, to the further detriment and endangering of the public health, and,

Whereas, It is the intent and purpose of said cottagers to utilize this lake as a place of recreation and physical restoration, and such purpose is in danger of being rendered abortive by the practices above set forth; be it, therefore

Resolved, That we, the said cottagers, do hereby call the attention of the State Board of Health of Indiana, and of the County Board of Health of Marshall County, Indiana, requesting said State Board of Health to promptly investigate the complaints embodied in the resolution, and if deemed advisable, to send its representative to said lake to investigate these matters without delay, owing to the great imminence of danger from the rapid approach of hot weather, and we further request the prompt abatement of such practices as nuisances and as dangerous to the public health.

MAXINKUCKEE ASSOCIATION.

OTTO STECHHAN, President.

FRANKLIN VONNEGUT, Secretary.

Respectfully referred to Mr. J. N. Hurty, Secretary of the State Board of Health.

I report herewith Mr. H. H. Culver to be the proprietor of the College grounds at Lake Maxinkuckee.

On July 16th the State Health Officer visited Lake Maxinkuckee, and together with Dr. S. C. Loring, visited every house upon the lake, carefully noting the sanitary conditions, as follows:

Lake View Hotel.—J. B. Schofield, manager; 35 rooms; capacity, 70 guests. Water closets were the Smead system, in which all excrement is consumed with fire; garbage collected in barrels and taken away daily; slops, wash water and laundry waste collected in a cesspool 14 feet in diameter and 12 feet deep. Drinking water from a flowing well.

Palmer House.—F. D. Lampson, proprietor; 30 rooms; capacity, 70 guests. Disposal of excreta by vaults, walled with lumber and situated about 200 feet from the lake shore. Wash water from the wash room drained into the lake; laundry water deposited in cesspools. Drinking water from a flowing well 75 feet deep.

There are 10 cottages between the two above-named hotels. All but one of these dispose of excreta by disposing same in shallow vaults. Slops and wash water are thrown upon the ground or deposited in cesspools. Garbage in some instances is hauled away occasionally; in other instances thrown upon the ground. At Mr. S. P. Sheerin's house earth closets are used for excreta disposal, laundry waste and wash water run upon the garden, and garbage is stored in barrels and hauled away every second day.

Culver Military Academy.—The buildings are three in number, and are three stories high and fire-proof, being built of brick, stone and steel. The main barracks contains 47 bed rooms; west barracks, 24 bed rooms; all well lighted and ventilated. Bath rooms and water closets on every floor. Drainage direct into the lake. Water supply from flowing wells. About 200 persons live at this academy for nine months in the year. All excreta, bath and wash water drained into the lake. Sewage fungus in lake abundant at the sewer mouth.

Bay View Hotel.—The Bay View Hotel is a one-story frame building, containing between 30 and 40 rooms. It is well situated on ground sloping toward the lake. Excreta is deposited in vaults in the rear of the building. The privies at the time of the inspec-

tion were in bad repair and were noisome. The water supply is from two driven wells. One is very deep and flows continually, being in front of the hotel. The other is driven, is shallow and does not flow.

There are eight houses between the academy and Bay View Hotel, and all but one have vaults in their back yards. This one, Mr. Bohem's is provided with an earth closet.

From the Bay View to the extreme south end of the lake there are 40 houses, and all have vaults except Mr. Vajen's.

Van Schoiack's.—At this old farm house, which is on the east shore, there is a filthy barnyard, from which there leads a wide pathway to the lake. The barnyard tilts toward the lake, and its filthy drainage is deposited therein. Immediately at the foot of the roadway, and leading out into the lake for a distance of 20 feet, sewage fungus is abundant and the water is distinctly colored.

Knapp's Hotel is situated on the west side of the lake, has 24 rooms and can accommodate 50 guests. Water supply is from a deep well. Excreta deposited in vaults; garbage deposited in barrels and hauled away; laundry waste and wash water drained into the lake.

From Knapp's north to the corporation line of Culver there are 14 houses, all provided with vaults and draining into the lake.

Culver (old name Marmount) is mostly built quite a distance from the lake on its western border and on the outlet, thus having a surface and underground drainage away to the west. Near the station there are a few houses, all provided with vaults, and as the surface drainage is toward the lake, it is very probable the underground drainage is in the same direction.

Lake Maxinkuckee, in Marshall County, Indiana, averages three miles long and two miles wide. Its greatest depth is 60 feet. There is a small, sluggish outlet, but no inlet. The extreme northern and southern ends are low and swampy, but the remaining shores on all sides are high, leaning toward the water from a considerable distance inland. A few cases of typhoid fever have occurred at this lake during the past five years.

SUMMARY.

Lake Maxinkuckee is at the present time a beautiful and pure sheet of water. The whole region is salubrious and the water sup-

ply on the north and eastern borders, being from deep flowing wells, is pure and wholesome. This flowing water is quite ferruginous, and sometimes, on that account, causes constipation and irritation of weak stomachs. This not infrequently necessitates the drinking of other water.

The surrounding summer population is about 1,500, while the permanent residents number about 600. All the drainage, surface and underground, is toward the lake, and consequently the contents of vaults and cesspools find their way into it. As shown above, all but one of the hotels and all but three of the private houses have vaults and cesspools, the academy leading its sewage directly into the water. It is plain, if this condition continues, that in time the lake will become polluted and foul, and as typhoid fever has already appeared, it is certainly high time that extreme sanitary precautions be taken. To the end, therefore, that disease may be kept away from this beautiful lake and the salubrity of the region maintained, the State Board of Health sent the following order to the Marshall County Board of Health and the following letter to Dr. Loring, County Health Officer:

INDIANAPOLIS, IND., August 9, 1897.

Marshall County Board of Health, Marshall County, Indiana:

In order to secure reasonable sanitary conditions at Lake Maxinkuckee and to preserve this lake against possible pollution in the future, you are instructed as follows:

Orders of the Marshall County Board of Health to be issued:

1. To the *Culver Military Academy*: To forthwith cease depositing its sewage in the lake, and to adopt for its sewage disposal some approved system for destruction by fire, or to adopt the intermittent sand filtration system.

To *Mr. Van Schoiack*: To forthwith abate his filthy barnyard, which, as it stands, is a nuisance, the drainage therefrom polluting the lake.

3. To *All Owners of Cottages and Hotels*: To forthwith abolish all privy vaults, inasmuch as it is proved that their contents in solution eventually find their way into the lake, and to adopt earth closets.

It is to be here noticed that Messrs. Vajen and Sheerin, and a few other cottagers, already have earth closets, and the Lake View Hotel is provided with an efficient fire disposal method.

4. To *All Persons Whatsoever*: Not under any circumstances to throw into the lake dead fish, garbage or offal of any kind.

5. To the *Owners of Bay View*: To abolish the shallow tube well in the rear of the building, as analysis proves it to be polluted, fecal bacteria being found therein.

Order 4 should be printed and posted in conspicuous places around the lake.

These orders should be issued without delay and carry with them a reasonable time limit in which to comply with the same. A statement saying that prosecution will follow any failure to obey these or this order, should attach.

If the above orders are not obeyed promptly within the time given prosecution should promptly be commenced.

J. N. HURTY,
Secretary.

INDIANAPOLIS, August 9, 1897.

S. C. Loring, M. D., Secretary County Board of Health, Plymouth:

Dear Doctor—You, of course, understand that under the law this Board must issue its orders to the County Boards of Health, and they must carry out the same.

Concerning the conditions at Lake Maxinkuckee. My studies and analyses of waters show it is high time that the health department should act if this beautiful lake is to be preserved pure and wholesome. Please, therefore, present to your County Board of Health the inclosed instructions. In talking with Mr. Newcomb, one of the owners of Bay View, he said: "The vaults at Bay View and all along the shore are dug into impervious clay. They are as tight as cisterns and it is foolishness to say that they drain underground into the lake." Like most all laymen he knows all about it. He assumes that there are no cracks or holes in the clay, in the face of the fact that when the vaults are filled by rains the water quickly disappears into the ground beneath. I have also proved the presence of fecal bacteria in the shallow tube well in the rear of the hotel. Our order is certainly in accordance with well-known facts, and the quick, unstudied opinions of those who have neither inspected sanitarily or made analyses are neither common sense or good reason.

Water taken from the lake near Culver's sewer is reeking with fecal bacteria, while at the other end the water is free from them. If Culver continues pouring sewage into the lake it will only be a few years until it will be a noisome cesspool, and will have to be drained.

Have the Auditor call a meeting of the County Commissioners, if necessary, to consider this matter, and issue the orders directed by the State Board of Health. If two members assent to your ordering in the name of the County Board it will be all right. I have showed this letter and our instructions to Mr. Malott, receiver of the Vandalia Railroad, and he says they are just right.

Please let us hear from you, as to progress, etc. Very truly yours,

J. N. HURTY, Secretary.

Promptly upon the receipt of this order the Marshall County Board of Health visited the lake and formally promulgated the above orders. The Military Academy has complied by draining its sewage upon efficient filter beds, and all cottagers will, before the next summer season, clean out and abolish all vaults and cesspools and substitute earth closets.

SALEM WATER SUPPLY.

The following letters explain themselves:

SALEM, IND., June 29, 1897.

Secretary State Health Board, Indianapolis, Ind.:

I wish to have the water of the water-works system of this city examined, as I am of the opinion that it contains the elements conducive to typhoid fever, and also of other infectious diseases. Would like instructions as to how to make proper application, quantity required, etc. Yours fraternally,

H. M. PAYNTER, M. D.

INDIANAPOLIS, July 3, 1897.

H. M. Paynter, M. D., Secretary County Board of Health, Salem:

Dear Doctor—In accordance with your request we send to-day, by express, two water cases. Full directions will be found in the envelope accompanying each case. You should fill one bottle directly from the well or other source of public supply and the second from a tap within the city. Return them by express the same day they are collected. Analysis will be made and report rendered immediately upon receipt of the cases. Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

The samples received July 6, upon analysis, gave the following results:

Parts in 100,000.

	<i>Reservoir.</i>	<i>Tap.</i>
Appearance	Clear.	Slightly Cloudy.
Odor	Creeky.	Creeky.
Solids	4.40	27.8
Loss on ignition	0.00	5.2
Fixed solids.	4.40	22.6
Chlorin	1.7	1.5
Free ammonia .....	.008	Trace.
Albuminoid ammonia .....	.006	.004
Nitrites	Trace.	.4
Nitrates	Trace.	.45

INDIANAPOLIS, July 8, 1897.

H. M. Paynter, M. D., Salem, Ind.:

Dear Doctor—Both samples of water have a creekly smell, which is due to certain algae which flourish at this time of the year. This odor is not pleasant, but it is not known to be unwholesome.

Reservoir sample is clear and free from sediment; tap sample contains sediment composed of vegetable debris and mineral matters. The organic matter found in either instance is not of the character nor quantity that would condemn the waters. The large amount of nitrates tell that the samples have in the past been badly polluted. It is plain then that the

present water has at one time contained organic matter which has fermented, the fermentation now being passed and the matter in great part destroyed.

In order to be able to make up a correct opinion of this supply, I must have a complete sanitary survey of the source of the reservoir, the method of carriage and an account of the likely effects upon the users. Please therefore, write us a complete account as above asked.

We send to-day another case as requested. Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

SALEM, IND., July, 1897.

J. N. Hurty, M. D., Secretary State Board of Health:

Dear Doctor—The water supply of Salem water-works is furnished from a cave spring, located in the side of a large hill. Large flanged stone sewer pipes lead from the spring to a cemented walled pool, from whence the water is pumped to a large reservoir on top of the hill near town. The surroundings at the spring are such that no surplus water can get into the spring or the pipes leading therefrom. The place is a secluded one, and no residence or barn is near, especially upon upper or hilly sides. No fever (typhoid) has ever existed nearer than Salem, and no drains nor vaults, or even branch or stream, enter the spring or pipes. The water is cool, clear and sparkling at the spring. Limestone abounds in this county. The spring is a half-mile from pumping station, pumps one-fourth mile from reservoir, and reservoir one-fourth mile from Salem court house.

The sanitary surroundings about the spring are good, and if the water is polluted it receives its detriment at reservoir. Yours truly,

H. M. PAYNTER, M. D.

INDIANAPOLIS, July 14, 1897.

H. M. Paynter, M. D., Salem, Ind.:

Dear Doctor—We have your very complete and satisfactory survey. Taken in conjunction with the analysis of the two samples, we feel certain in saying that the water supply of Salem is potable. We would not be surprised, however, to hear at any time that vegetable matter has grown in the water to such a degree as to impart an offensive odor. We think it proper that you should inform the citizens that the supply is potable; we cannot say that it is extra good. Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

DARLINGTON SANITARY AFFAIRS.

The following letter from Dr. Coffman, and the answer appended, are self-explanatory:

DARLINGTON, IND., July 5, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—In behalf of the general health of our town I would like your opinion in regard to the cemetery here. There has been a continued

6—RD. OF HEALTH.

fight for some time in regard to allowing the owners the privilege of extending the said cemetery nearer to town. They have a new addition platted, which extends to the corporation line, and there are dwellings on the east and south sides of the same (it is on the west side of the town). Now, we have the most of our sickness in that part of the town and want to avoid it if possible. Can you not come out and look after this matter, or does the State allow you for doing such? I am ignorant of the law in this regard, and I would also like to have you look after this if you can. Farther, if the State Board of Health decides the above as injurious to health and orders it stopped, have they any recourse? Hoping to receive an early reply, I am, yours respectfully,

DR. J. S. COFFMAN,
Health Officer Town of Darlington.

INDIANAPOLIS, July 6, 1897.

J. S. Coffman, M. D., Health Officer, Darlington, Ind.:

Dear Doctor—It certainly is not desirable to mix the dead and the living together, yet we frequently find people who think there is no objection to such a procedure. Graveyards should, for well-known sanitary reasons, be far removed from habitations; esthetic and practical reasons also demand that this should be so. Frequently in the name of economy we find people who desire to extend graveyards into cities and towns. This is not an economy, but rather an extravagance. Frequently epidemics are traced to such conditions, and then graveyards grow faster than the towns or cities. The statutes of the State give the power to locate graveyards to the town and city councils. They may extend the same to your dooryard if they wish to do so, and the only power to restrain such an act would be an injunction. The only way for you to do is to arouse public opinion to such a degree as to prevent the conditions which are threatened. This, it seems, would not be a difficult matter. I will visit Crawfordsville next Monday, and if possible will run up to Darlington and see if we can give you any help in this matter. Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

REPORT OF VISIT TO DARLINGTON.

On July 12 the Secretary arrived at Darlington. A survey of the town, and especially of the conditions complained of above, was made. Darlington is in Montgomery County, Franklin Township. It is built upon level ground, is composed mostly of frame houses and has about 1,000 inhabitants. Its streets are clean and its general appearance is inviting. Dr. Coffman, City Health Officer, had been active in securing good sanitary conditions. His inability to decide the cemetery question caused him to call upon the State Board for help. The cemetery in question was opened (old part) in 1845, new part in the spring of 1894. It covers about seven acres, is on the immediate border of the town and has a knoll in the center running east and west. Bodies are buried on top of this.

knoll and on either side. To the south, across the road, stand four small one-story frame houses. In these houses within the last two years nine cases of typhoid fever and much minor bowel troubles have occurred. Within all Darlington there have been 20 cases of typhoid in the last two years.

Samples of water from these wells were analyzed. One from a well within the cemetery bounds, one from a well supplying the four houses mentioned and one from a well east of the cemetery. The first two samples were polluted, as shown by the accompanying tables of analyses. The third sample was potable.

Parts in 100,000.

	First.	Second.	Third.
Appearance.....	Faint Yellow	Faint Yellow	Faint Yellow
Odor.....	Creeky.	Creeky.	Faint.
Chlorin in chlorides.....	1.1	1.3	3.1
Free ammonia.....	.022	.006	.009
Albuminoid ammonia.....	.020	.022	.030
Nitrogen as nitrites.....	Abundant.	Abundant.	Abundant.
Nitrogen as nitrates.....	Trace.	Trace.	Trace.
Total solids.....	46.	42.	86.
Loss on ignition.....	16.	11.8	36.
Test in carbol-bouillon.....	Growth.	Growth.	Growth.

The above facts and other considerations seemed to warrant the Secretary in sending to Dr. Coffman the following letter:

INDIANAPOLIS, August 4, 1897.

Dr. J. S. Coffman, Health Officer, Darlington, Ind.:

Dear Sir—You are respectfully directed to instruct the Town Trustees of Darlington as follows: The sanitary survey of Darlington, as made by the State Health Officer, shows the cemetery on the western border of the town to be a nuisance and a menace to the public health. The following facts lead to this conclusion:

1. Nine cases of typhoid fever have occurred in the four frame houses immediately south of the cemetery within the last two years.

2. By analysis, the water in the cemetery well and in the well between the four frame houses is found to be polluted, while the water in the well on the east of the cemetery is potable.

3. The surface contour of the cemetery and immediate surroundings indicate that the underground water trend from about one-half of the cemetery is toward the dwellings to the south.

This cemetery should be closed and no more burials permitted therein. This may be done by the Town Trustees according to the law (R. S. 1894, secs. 4279 and 4280). The Town Trustees will be compelled to close it upon petition from five citizens, the petition to set forth the fact that the State Health Officer has condemned it, and the reasons given for condem-

nation. The houses to the south of the cemetery should be condemned, as they now are, and an order made by the Town Trustees assembled as the Town Board of Health, that they be immediately vacated and thoroughly renovated by the owner. The present wells should be condemned and new ones forbidden, for all ground water in this neighborhood will certainly be polluted. This renovation is necessary because these houses, having had in them so much typhoid fever, are certainly infected. Renovation should consist in raising the houses at least two feet above the ground, cleaning and freshly painting all the interior woodwork and scraping and refinishing the plastering or replacing the same. Unless this is done new cases of typhoid fever, or possibly other enteric diseases, will almost certainly appear in these houses in the future.

The attention of the Town Trustees of Darlington is further directed to the fact that within the last two years eleven cases of typhoid fever, besides those above named, together with numerous other cases of bowel disorders, have occurred in Darlington. This was all due to unsanitary conditions, and the Health Board of the town should order a general cleaning up of all premises. Vaults should be cleaned to the bottom and disinfected; all wells at a less distance than fifty feet from any vault should be condemned; garbage should be sanitarily collected and removed, stables and stable yards should be put in sanitary condition.

It is expected that diphtheria and other diseases will appear upon the opening of school in the fall. To prevent such a calamity, or to reduce such possible visitation to a minimum, the Town Board of Health should thoroughly clean and disinfect the schoolhouse, clean and disinfect the privies and make certain that the drinking water furnished is pure and wholesome. Upon the opening of the schools, the Town Health Officer should make a medical examination of teachers and pupils, and any one afflicted in the least degree with a communicable disease should be excluded.

The above sanitary measures are advised, because it seems entirely unnecessary for the State Board of Health to issue an order.

Very respectfully,

SECRETARY STATE BOARD OF HEALTH.

SEWER AT SEYMOUR.

SEYMOUR, IND., July —, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—We wish to call your attention to a matter which we believe comes under your jurisdiction, as follows:

We herewith furnish you a drawing of a sewer maintained by this city, which, by an ordinance of the City Council, permits the same to be tapped for the purpose of draining of privy vaults on and near the line of sewer from Ewing to Pine streets, as shown by large red line in drawing.

The main sewer from Ewing to Pine streets is about four feet square, is constructed of rough stone, at the end of which is a large catch-basin. From this catch-basin to White River is but a two-foot tile. The four-

foot sewer, being of rough stone, the bottom of which is flat, allows a large amount of filth to adhere to it for the entire length until a rain-fall, when it overflows at end of four-foot sewer where catch-basin is, scattering the filth therefrom along the line of Branch street west, Lynn street north and south, and over a part of the property adjoining the streets named.

The property owners and residents west of Pine street recently petitioned our City Council to arrange this sewer in such a manner that the overflow of this filthy water be confined so as not to flow over the streets and property adjoining. The committee to whom our petition was referred reported back to the City Council in effect that the sewer was in good condition and nothing need be done, which report was adopted by the Council.

We claim that, as the city, by ordinance, permits the tapping of this sewer for the purpose of draining privies and other refuse matter into it, the city is thereby bound to arrange the sewer in such a manner that it be no detriment to the health of any part of the city.

We have conferred with Dr. M. F. Gerrish, of this city, concerning this matter, who has advised us to correspond with you, and urge that you give this matter early attention by a personal examination of same.

Very respectfully yours,

GEO. D. PRICE.

A prompt reply was made, to the effect that the Secretary would visit Seymour on July 15th, and the visit was made accordingly. The conditions were found to be as represented, and the following letter to the City Health Officer explains the situation:

INDIANAPOLIS, Aug. 5, 1897.

Dr. Geo. G. Graessle, Seymour, Ind.:

Dear Doctor—Through you, as City Health Officer, the State Board of Health wishes to make the following suggestions concerning the sanitary affairs of Seymour:

SEWER.

The sewer extending from Ewing to Pine streets is not properly constructed for carriage of other than surface drainage. If sewage is introduced, its flat, rough bottom will retain offensive matters and is likely to become noisome and a menace to health. The arrangement at Pine street of catch-basin and continuation of sewer in reduction from four (4) to two (2) feet in diameter, under the present conditions is bad. This must be apparent, because the first rush of sudden and heavy storm-water, carrying with it accumulated filth, can not all pass through the two-foot pipe, and must overflow on the lots beyond. This is, then, an effective arrangement for spreading accumulated sewer filth over the land beyond the mouth of the sewer. In the future, when the sewer connections are increased in number, this danger will be greater.

As a remedy, this Board suggests that the present four-foot flat-bottomed sewer have a rounding smooth cement bottom built in it. So altered, the sewage will be confined to the center and be carried away by

the ordinary water-flow. No accumulations can occur when the sewer bottom is round and smooth, and then the sudden rush of storm-water will not threaten the conditions above described. Provision better than at present exists should be made for carrying away any overflow at the end of the large square sewer. A ditch as now provided, if kept open and free and if extended much beyond its present length, will suffice, unless it is desired to encourage the growth of the city in this direction. Under the latter circumstances the overflow should be conducted underground, either by building a second two-foot sewer or extending the four-foot one beyond all intended dwellings. Another plan might do, namely, the building of a brick or asphalt street with depressed center, which would serve as a surface ditch and a roadway. There can be no doubt that if these improvements are made a serious threat against the health of the city will be removed.

EXCRETA DISPOSAL.

It is certainly unreasonable to expect that after polluting the earth with human excrement it would be possible to draw wholesome water therefrom. Privy vaults and wells sooner or later become connected underground, and then the users of such water may suffer from a number of diseases. Typhoid fever, diarrhoea, dysentery, sometimes indigestion and frequently that undefined complaint called malaria proceed from vault-polluted well water. It is highly improper to do other than preserve the ground upon which we live and from which we draw the larger portion of our water supply in its original cleanliness and purity. To do this the City Council of Seymour is urged to pass a strong ordinance abolishing all vaults and sinks. Let it order that they shall be emptied, disinfected with lime and filled with pure earth.

For the disposal of excreta, ordain that privy earth closets shall be constructed by all owners of habitations when sewer connections can not be made. The earth closet system requires a privy having beneath the seat a drawer about two feet deep, removable from the rear. Dry earth to the depth of four inches is provided in the beginning and each user of the privy is required to sprinkle upon his excrement a little dried earth, kept at hand in a proper receptacle, thus imitating the decency of the cat.

When the drawer is nearly full, it should, under a strong penalty for neglect or failure, be carried to the fields and used for manure. This plan is practicable, being extensively used in Eastern towns. It effects the economical and sensible disposal of excreta by use as manure, prevents the pollution of the ground and the water in the ground, and sensibly betters the public health.

QUARANTINE AND DISINFECTION.

Quarantine or isolation of all infectious diseases, such as smallpox, typhus fever, yellow fever, diphtheria, scarlet fever, measles, etc., is absolutely necessary if they are to be held in check. It is recommended by the State Board of Health, in order to make this work really effective, that an ordinance be passed—if one does not already exist—giving police

powers to the City Health Officer in all matters pertaining to health; commanding all physicians to give immediate notice of infectious diseases of which he is professionally cognizant; requiring the Health Officer to properly quarantine the persons affected, and when necessary, to disinfect the house with formaldehyde. In order to accomplish real disinfection the Health Officer should be provided with an efficient formaldehyde generator.

Very respectfully yours,

SECRETARY STATE BOARD OF HEALTH.

A reply was early received from Dr. Graessle, saying he would bring the subject matter of the foregoing letter before the Mayor and Council at its next meeting.

On August 4th the Secretary again visited Seymour on account of the water supply. The following letter explains what was done and recommendations made:

INDIANAPOLIS, Aug. 7, 1897.

To the Honorable Mayor and City Council of Seymour, Ind.:

Gentlemen—The State Board of Health, acting in the line of its legal and public duty, most respectfully presents for your consideration the following communication:

SEYMOUR'S PUBLIC WATER SUPPLY.

Public water supplies should always be filtered. If from a river, creek, lake or wells, no matter, it should be filtered just the same. The reason is clear. It is not only possible, but to be expected that pollution may enter any supply at any time. So if a certain river water be pure for ninety-nine days, it might on the one-hundredth day bring typhoid, diarrhoea or dysentery. We must always be on the watch against water-borne diseases, as we are ever on watch against fire, and the only security is through filtration.

Seymour procures its public water supply from the East Fork of White River. This river receives the sewage of Columbus less than thirty miles up the stream, and most probably receives also much drainage from barnyards and manured fields. The stream is frequented by fishermen and hunters, and there is no certainty that they are all free from disease. The seven analyses made by this Board are appended. All show an unpotable water. The last two analyses, made July 30th and Aug. 2d, respectively, show the presence of intestinal bacteria, which tells positively of fecal pollution. It is proved therefore that the public water was of unfit chemical composition in all seven instances, and in two out of seven tests fecal matter was present. In considering these facts it should not be forgotten that fresh excrement from healthy persons will not necessarily cause disease when ingested. The excrement of anyone recovering from typhoid fever, from diarrhoea, dysentery, etc., contains the germs of those diseases, and it would be dangerous indeed to drink water containing such pollution.

It is certainly of vital and great economic importance that Seymour's public water supply be efficiently filtered. The proper means to bring this about should be immediately adopted. There are only two methods of filtration which are efficient. They are known as "The Mechanical" and "The Natural." The latter method is mostly used in Europe and involves the greatest primary outlay. The natural method is in use at Lawrence, Mass.; Far Rockaway, Long Island; Poughkeepsie, N. Y., and many other cities of the United States.

The mechanical method is in use in Terre Haute, Sullivan and Warsaw, in Indiana, and in scores of cities and towns in other States. Its first cost is less than the first cost of the natural method, but as a coagulant—aluminum sulphate—must be used, a perpetual expense for material is entailed.

It will probably be found the most practicable to put in mechanical filtration at Seymour. If done, your city will have an abundant supply of soft, pure water, and will be secure against typhoid fever and all water-borne diseases.

Very respectfully,

SECRETARY STATE BOARD OF HEALTH.

From Dr. Graessle's letter herewith it will be discovered that Seymour is moving in all the suggestions above given.

SEYMOUR, IND., Aug. 25th, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Doctor—Yours of the 24th inst. to hand. In reply I will say that your reports were referred to the city authorities, and they in turn have taken steps to immediately follow out your recommendations, and I think that everything will be arranged as soon as it is possible to do so. The Water Works Company are also arranging to put in the proper filtering plant, and everything will be arranged without friction.

I am sorry that I did not get to see you when you passed through the city last week, but I was unavoidably detained and could not be at the train.

If things do not progress as they should I will keep you advised.

Yours truly,

GEO. G. GRAESSLE, M. D.

SANITARY RECOMMENDATIONS FOR ARGOS.

INDIANAPOLIS, Aug. 17th, 1897.

Dr. Wm. A. Oyler, City Health Officer, Argos, Ind.:

The State Board of Health respectfully recommends to the town of Argos the following sanitary improvements:

The old cemetery within the town should be closed. It threatens the public health and obstructs the growth of the place. It also, on account of its location, is the subject of comment by visitors, thus being a commercial disadvantage.

Many noisome privy vaults are to be found in Argos. The writer noticed offensive privy odors at two places while walking along the street. Typhoid fever, dysentery and similar diseases will always appear eventually where such conditions exist.

The Town Trustees should immediately order that all vaults filled to within two feet of the top be forthwith emptied to the bottom and disinfected with lime, and that all sinks, slop-holes, slop-barrels, etc., if at all offensive, be abated at the order of the Town Health Officer.

Disinfection.—Every town should be provided with an efficient disinfectant. Like a fire engine, no one knows when it might be needed, and both fire engine and disinfectant should be at hand always ready for use, yet with the hope they will not be needed. If diphtheria, scarlet fever or smallpox should suddenly visit Argos, a disinfectant would, if properly used, prevent many deaths and cases of sickness. This Board recommends disinfection (fumigation) by formaldehyde. There are several formaldehyde generators on the market, but all are not efficient. The Trilliat apparatus, made in New York, is a good one; also the Robinson, made at Portland, Maine. The Moffett formaldehyde generator, made by Eli Lilly & Co., Indianapolis, is among the best, and, as it is an Indiana invention, it is especially recommended.

Please give us a full report of what is done with the above recommendations.

Very respectfully yours,

SECRETARY STATE BOARD OF HEALTH.

ORDER TO MONROE COUNTY BOARD OF HEALTH ON ACCOUNT OF THE NUISANCE EXISTING AT BLOOMINGTON.

INDIANAPOLIS, Sept. 8th, 1897.

Monroe County Board of Health, Bloomington, Ind.:

I herewith transmit the following order passed in regular session of the State Board of Health September 3, 1897, and I am instructed to explain that a petition signed by 112 citizens of Bloomington was received by this Board Aug. 20th, 1897, as follows:

"To the State Board of Health:

"We the undersigned citizens of Monroe County, Indiana, respectfully petition that the hitching rack around the public square at Bloomington be removed and abolished, because the conditions it engenders are injurious to health, indecent, offensive to the senses, and constitute a nuisance."

This testimony, and also the testimony of the State Health Officer, who has made a special inspection of the conditions complained of, make it the clear duty of this Board to issue this order. We earnestly hope that no delay will occur in its execution.

Very respectfully,

SECRETARY STATE BOARD OF HEALTH.

ORDER TO ABATE NUISANCE.

It is ordered that the Monroe County Board of Health shall, without unnecessary delay, abate the nuisance existing on the public square of Bloomington, by causing the streets bordering the public square to be cleaned of all animal excrement and of all unwholesome and noisome substances which might be injurious to health or indecent or offensive to the senses. Said Board of Health shall also remove permanently, or cause to be removed permanently, all conditions which might hereafter cause or permit the accumulation of excrement, or of any matter which might be injurious to health or offensive to the senses.

The above order was passed in regular session of the State Board of Health, September 3d, 1897.

Attest:

HENRY JAMESON, President.

J. N. HURTY, Secretary.

INDIANAPOLIS, Sept. 8th, 1897.

Dr. A. J. Axtell, Secretary Monroe County Board of Health, Bloomington:

Dear Doctor—The inclosed order of the State Board of Health to the Monroe County Board of Health was passed in regular meeting, September 3d, 1897. Without delay please present said order to the Monroe County Board of Health, making prompt report of when presented and of action taken.

The receipt of the petition signed by 112 citizens of Bloomington, and also the report of the special inspection by the State Health Officer showing the nuisance to exist, makes it clearly the duty of the State Board to issue this order. The right of this Board to take this action is clearly set forth in the statutes. (See R. S., Sec. 6718).

It is hoped that the order will be favorably received and promptly carried out.

Respectfully,

SECRETARY STATE BOARD OF HEALTH.

COMPLAINT OF A NUISANCE AT PAOLI.

PAOLI, IND., Aug. 5th, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—You should come or send some one here to see what I, and every other person not interested, would call a typhoid and malaria fever breeder; in fact, an epidemic of most any disease. A few parties built a dam across the little stream called Trick Creek, stopped the free flow of water, and the consequence is the creek in places filled up with all kinds of decayed vegetable matter and muck, in places five to six feet. The water has become stagnated, with a green scum over the surface. They have let the water off now and this muck is covered with green substance. There is no way to stop this nuisance except to remove all obstructions so the water will flow freely, then when freshets come it will clean some of this out. At this time there is a stench from this stagnated pool. If you could see and smell this creek this morning you would be convinced. My property is on the creek.

INDIANAPOLIS, IND., Aug. 9th, 1897.

_____, Paoli, Ind.:

Dear Sir—We thank you for your favor of Aug. 5th, concerning the nuisance of which you complain. I have written to Dr. E. D. Laughlin, a member of this Board, living at Orleans, and he will very probably call on you soon and try to give relief.

Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

INDIANAPOLIS, IND., Aug. 9, 1897.

E. D. Laughlin, M. D., Member State Board of Health, Orleans, Ind.:

Dear Doctor—We have a complaint from one J. F. Stucker, of Paoli. He says that a very bad nuisance exists in the form of a dam across the small stream near his town. He further states that appeals to the local health authorities have not been answered. Would it be possible for you to visit Paoli and look into this matter? I will have to go to Knox, Starke County, this week, and next week will have to go to Nashville to attend the National Conference of State Boards of Health. If you could therefore visit Paoli as suggested, a great favor would be rendered.

Very truly,

SECRETARY STATE BOARD OF HEALTH.

ORLEANS, IND., Aug. 14th, 1897.

Secretary State Board of Health:

In response to your order, I visited Paoli Aug. 11th, and made an investigation of the cause of complaint. The parties owning the Mineral Springs Hotel had placed a dam across the creek—a stream about fifty feet wide when moderately full. The dam caused a stagnation of water for a distance of about five hundred yards, upon which a heavy green scum of vegetable matter had collected, causing a very disagreeable stench to those near it. The same condition existed in the stream below the dam as above it; in some pools of water it was worse.

I requested the parties owning the dam to open it, which they readily consented to do, and I am pleased to report to you that the nuisance has been abated.

I gave Mr. J. F. Stucker notice of the action of our Board in the matter, and I suppose he is satisfied.

Respectfully yours,

E. D. LAUGHLIN.

TYPHOID AT LADOGA.

The receipt of the following letter—the writers' names by request omitted—resulted in a visit to Ladoga on September 7 by the Secretary:

LADOGA, IND., Aug. 25, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—We are informed through the columns of the daily papers that you occasionally visit different parts of the State, investigate the sanitary conditions and recommend and enforce relief where it is possible.

We write you a few lines regarding the non-sanitary conditions of the town of Ladoga. We do not do this to obtain notoriety or to have the matter become public, but simply to get your presence and co-operation in ridding ourselves of filth and disease sources. Last summer in one house here I treated a prolonged case of typhoid in a tenement house that had a cellar under it, where mud was from three to six inches deep and floor and sleepers were wet and moldy. I made numerous attempts to get both local and county health officers to investigate this matter, and it was never even inspected by either of them.

Another case of typhoid undoubtedly came from a foul well, and the well was not inspected, and remains open to-day.

Our street sprinkler obtains his water from a spring at the immediate foot of the hill where our cemetery is located. Could you wonder if we had disease from this source?

I have tired trying to get relief from local or county health officers. Can you make us a visit and recommend a means of relief at an early date? The above are a few of the cases that are most urgent and certainly are enough to make you see the need of relief.

Let us hear from you at an early date, and oblige.

Yours very truly,

REPORT OF STATE HEALTH OFFICER.

Ladoga contains about 1,500 inhabitants and is mostly built on level ground. Three years ago "considerable typhoid" prevailed here. Two cases now exist. No dysentery found at present in the town, but prevails to some extent in the surrounding country. All water supply is by cisterns and wells. There are very few dug wells, most wells being driven, but no especial care seems to have been taken to drive to extra depths. The vault system of excreta disposal exists. A noisome slaughter house stands immediately on the border of this corporation to the south. The cemetery is situated south of the town, a small creek being between cemetery and town. A spring under the cemetery hill furnishes the water for sprinkling the streets. The town streets are graveled, with brick and gravel sidewalks. The Cooms house, where typhoid now exists, is dilapidated, with a damp, muddy cellar.

The following sanitary recommendations were made to the Town

Board of Trustees, and assurances received they would be fulfilled to the letter:

INDIANAPOLIS, Sept. 7, 1897.

Dr. E. O. Price, City Health Officer, Ladoga, Ind.:

Dear Sir—For the sanitary betterment of the town of Ladoga the State Board of Health recommends as follows:

That the very filthy slaughter house on the southern border of the town be immediately abolished. To do this the Town Trustees may pass an ordinance commanding the same to be closed, and ordering that the place be put in first-class sanitary condition, according to the directions of the City Health Officer. If not done within a certain specified time the Trustees can order that it be done and the cost lie as a lien against the property. The slaughter house as it now exists is a constant threat against the health of Ladoga. It also furnishes the conditions which cause hog cholera, and the hogs fed there on offal will almost certainly have trichina, and their flesh will be a threat against the health and life of those who consume it. It is a fact that 60 to 70 per cent. of slaughter house offal-fed hogs have trichina.

There are some vaults in Ladoga which should be cleaned. Their location can not be given by our inspector, but he reports that at two places on the public street he detected the privy smell. These should be searched out and the owners compelled to make them clean and decent. This Board recommends that Ladoga's Trustees pass an ordinance that all vaults shall be cleaned to the bottom and disinfected with lime whenever filled to within two feet of the top. The Trustees should also properly compensate the Town Health Officer, require him to enforce all health ordinances and make to them a monthly report. Failure on his part to attend to his duties should be followed by fine and removal. The Cooms house, where typhoid fever now exists, is in an awful unsanitary condition. This house should be either torn down and its site drained or it should be renovated by being raised, repaired and repainted, and the cellar cleaned and drained. This place is a good nidus for disease and death, and if allowed to remain as it is some of Ladoga's citizens may expect to pay for it most dearly. One rotten apple may spoil the whole barrel full, and so one nasty, dirty place may easily become the center of an epidemic. The "spring" (?) from which the sprinkling water for the streets is taken is stagnant and badly surrounded. Its water most probably is contaminated from the graves in the cemetery, and so it certainly would not be a mistake to abandon such water for daily sprinkling in hot days when fermentation is high and dangerous effluvia are likely to be generated. Better sprinkle with water from a deep well. It is not necessary to establish that this stagnant so-called spring has caused sickness before it is abolished, for the conditions of wholesomeness are unquestionably absent. If during the winter any diphtheria should appear in the schools, be sure to dismiss them at the first case. Don't make the mistake of waiting until the school is all aflame with it before action is taken.

We are confident that Ladoga's happiness, well being and wealth will be increased if the above suggestions are carried out.

Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

DIPHTHERIA IN OWEN COUNTY.

The following letter caused the Secretary to visit Owen County September 28, 1897:

FREEDOM, IND., Sept. 21, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—We wish to inform you that diphtheria is raging a few miles west of this town and has been in that neighborhood for one year. The county and township officials seem to be unable to stamp it out. Last year our schools were all broken into and closed down on account of this disease, and now, as citizens of this State and deserving the protection of its laws, we appeal to you for assistance and more rigid quarantine regulations against the infected district. The people of those districts do not regard the quarantine laws placed over them by the county and township officials, and go about their work and from house to house and come to town whenever it is convenient and suits their free will. We have reported these matters and county officers have quarantined, but it does no good. The disease is spreading and it is only a question of a short time until it will be in our town. The town and township schools begin in two weeks, and we fear a repetition of last year's trouble and probably the death of some of our people and children. We earnestly pray you to act, and act immediately, to protect us from this disease and its evil results.

Yours truly,

J. L. ARTHUR, Principal Freedom Schools.
W. H. REESE, Druggist.
ALBERT DAVIS, Butcher.
G. E. SCOTT.
E. W. CANNADY, Merchant.
S. N. CHAMBERS, Druggist.
R. L. M'INTOSH, Agent.
R. B. FRANKLIN, Blacksmith.
LEWIS COWEIN, Superintendent Stone Quarry.
W. L. ARMENTROUT, Barber.
J. M. D. HUDELSON, Pastor M. E. Church.
CLINTON JOHNSON, Pension Agent.

Dr. N. D. Cox, Health Officer of Owen County, accompanied the Secretary to Freedom, from there to Patricksburg and then to Spencer. There was no diphtheria at Freedom, but several cases in the neighborhood, and fear was entertained that it would find entrance through people from infected houses coming to town. The town of Freedom is not incorporated and has no health officer. Some very unsanitary conditions exist, which Dr. Cox will have immediately remedied. A school house, a frame structure built in 1883, is dilapidated, unsanitary and provided with miserable out-

houses. The trustee was directed to remedy all this and a company of citizens was urged to give him their support. At John Fry's, several miles northwest of Freedom, there were seven cases of diphtheria, eleven in the family living in a house of two rooms. Cases were all recovering. Two small children, two and one-half and three and one-half years old, respectively, were each immunized with 250 units of antitoxin. Formaldehyde, to be diluted, was left to be used as a gargle, and orders were given that no sick member of the family should go to town or visit neighbors until well, and no well member without first bathing and changing clothes. Diphtheria pamphlets distributed. At Andrew Fulk's one child had recently died of laryngeal diphtheria. At time of visit one child, a girl about two and a half years old, was recovering from diphtheria. There are 10 in Mr. Fulk's family, living in a house of four rooms. Some formaldehyde was left, with directions how to use as a gargle, and orders given not to visit neighbors or to go to town without bathing and changing clothes. Orders were also given that after the child had fully recovered the house should be cleaned and disinfected with burning sulphur. Diphtheria pamphlets distributed.

At Patricksburg, at the house of Henderson Faulk, five in the family, one child about five years old, had diphtheria. Case was isolated and was under the care of Dr. Sloan. Diphtheria pamphlets were given to the parents. At the house of George Walk, five in the family, there were three infected. All were under care of a local physician. Family was quarantined and fully instructed. Diphtheria leaflets were left.

At Spencer one case of diphtheria was found. It was isolated; house was quarantined and all was being carefully looked after. The school house at Spencer, preparatory to opening of the school, had been put in prime sanitary condition.

NUISANCE AT GREENFIELD.

A letter from Dr. Black, Health Officer at Greenfield, Hancock County, asking the aid and advice of the State Board concerning certain nuisances, caused the Secretary to go there September 21, 1897.

He, together with the county and city health officers, the city engineer and superintendent of the straw-board mill, made a sanitary inspection of the method of offal disposal of the mill, and with the County Health Officer, made an inspection of the jail and also of parts of the town, and the following report, with recommendations, was sent to the City Health Officer at Greenfield:

STRAW-BOARD PONDS.

There are three ponds, in all covering about five acres. The refuse from the mill, which uses 25 tons of straw daily, is conveyed by a large wooden trough to pond No. 1, which is about two and one-half acres in extent and seven or eight feet deep. Here the greater portion of the suspended insoluble silica and fiber are allowed to precipitate. Pond No. 2, connected on the same level by a canal with No. 1, receives the overflow, and here a second sedimentation occurs. From No. 2 the now almost clear but yellow-brown liquor flows into pond No. 3, where a third sedimentation takes place of most of the suspended matter which failed to fall in the two first ponds. The overflow from this last pond is conducted directly into Brandywine Creek. All three of these ponds are extremely unsightly. Their contents are in a high state of fermentation, and the air thereabouts is laden with offensive gases. Rank vegetation surrounds the ponds. Pond No. 3, which contains comparatively little sediment, and is filled mostly with brown-yellow water bearing the soluble matter from the straw, smells much worse than the other two. This is due to the fact that the yellow suspended matter that is pretty well precipitated in ponds 1 and 2 is principally silica and fiber, which cannot ferment, while the soluble matters carried in solution into pond No. 3 are fermentable. The offensive matters (or rather the matters which will become offensive and poisonous through fermentation and putrefaction) are in solution in the liquid waste which proceeds from the mill, and it is this waste which should be destroyed in some sanitary way. Disposal by storing in ponds is a great mistake, for instead of a gain, the conditions are created which produce a greater offense, inasmuch as it is confined to a smaller area than would proceed from direct drainage into the stream.

OPPOSED TO PUBLIC HEALTH.

These ponds are certainly opposed to the health of the citizens of Greenfield, for such a mass of decomposing matter favors the incubation and advance of cholera, dysentery, typhoid fever and other filth diseases. The ponds present a large amount of decomposing matter confined to a limited area; offensive and unwholesome gases are generated and burden the air, and the rotting mass constitutes a culture bed where disease germs might grow and flourish.

RECOMMENDATIONS.

It is recommended that drainage into these ponds be immediately discontinued and that they be permitted to dry up, this process being hastened by hauling in dry earth. By special ordinance the City Council can cause this to be done, or the County Board of Health can order it done, and if ignored, apply to the court for a mandate.

THE JAIL.

The jail of Hancock County, at Greenfield, is very unsanitary because of the damp cellar which is under the whole building and because of the improper closet facilities. If any member of the Sheriff's family or any prisoner should contract disease in this house as it now exists, damages could be obtained against the county.

RECOMMENDATIONS.

The cellar under the Sheriff's residence and under the jail should without delay be made clean and dry and proper ventilation provided. The present closets in the jail and their connections with the outside vault should be abolished and the best trapped hoppers connected with the sewer be provided.

The filthy bedding in the cells at the time of my inspection should be burned and the whole interior of the jail should be cleaned and fumigated.

PRIVIES.

At many places in Greenfield the odor from unclean privies is very much in evidence. This fact is enough to force the conclusion that a general cleaning of vaults or privy boxes is required, and this is urgently recommended.

7—BD. OF HEALTH.

THE NEW WATER SUPPLY AT THE INDIANA STATE PRISON.

The Assembly of 1897 appropriated \$15,000 for a new water supply at the State Prison. The only fit source is Lake Michigan, about one mile distant. Before laying the pipes the prison authorities called upon this board to give advice and make analyses. Accordingly, the Secretary visited the prison on May 24th. Inspection was made of the proposed source of supply by visiting and carefully surveying the shore of the lake at the point where the pipe line is to leave the water, and by taking a tug out into the lake, making soundings and securing samples of the water from the bottom and surface at distances of 2,000 and 3,000 feet from the shore. The shorter distance lies within the line of the breakwater, and the first samples of water from surface and bottom showed pollution. The greater distance lies without the breakwater, and the samples were potable. Owing to the vast amount of sewage—over 175,000,000 gallons daily—which Chicago pours into the lake, and the prevalence of northwestern winds, it is to be expected that pollution will appear from time to time throughout the whole southern part of the lake. It will therefore be necessary to eventually put in filters to insure a pure supply. Lack of sufficient funds will prevent the immediate adoption of filters. From various data it is calculated that the lake water, which will surely show occasional pollution, will be an improvement of 90 per cent. over the present supply. The present supply carries continual pollution and is highly corrosive to steel boilers.

Six analyses were made. The first two samples, sent by the warden, Mr. Harley, analyzed badly. Both the chemical and the bacteriological evidence was against them. The results and accompanying letter were as follows:

INDIANAPOLIS, May 8, 1897.

Mr. Charley Harley, Warden, Michigan City, Ind.:

Dear Sir—I inclose the results of my sanitary analyses of the samples of water from Lake Michigan. The figures cause me to look upon the water with suspicion. The amount of free ammonia is very great and the albuminoid is high. The nitrogen as nitrites counts strongly against the samples, and the fact that they both grow in Parlett's solution is very serious. The amount of chlorin is significant, but I believe much of it came from the jugs, which are salt glazed, and therefore it must not be

considered until all doubt is removed. On the whole these analyses condemn the waters, but we must go slow in the direction of condemning and also in the direction of assuming that the lake water, at least at this point, is all right. Chicago, you know, is full of typhoid fever on account of lake water, and it is by no means improbable that contamination even from that distance has reached Michigan City lake front. Michigan City, too, drains into the lake, and it will not do to decide offhand that contamination does not come from right at home. Again, my bad results might possibly proceed from the jugs in which the water was sent, and this possible source of error must be eliminated before we make a final decision. The first thing to do, then, is to have me send you approved water cases containing glass stoppered bottles, which are positively known to be chemically clean. Water samples carefully collected in these bottles can not be under suspicion of contamination from the container. A second analysis from these will give a positive and satisfactory basis for judgment. You are probably aware that all the Lake Erie towns and cities which are supplied with lake water have a typhoid fever rate above the average, and it is said that the Lake Michigan cities and towns which are supplied from Lake Michigan also have an above-average typhoid rate. If the water supply from the lake is even remotely liable to introduce typhoid fever or even simple bowel troubles into the prison, it will not do to use it in the raw state, and filtration must be resorted to.

Awaiting your reply, I am very truly yours,

SECRETARY STATE BOARD OF HEALTH.

SANITARY WATER ANALYSIS.

Parts in 100,000.

	<i>Surface.</i>	<i>Bottom.</i>
Appearance in two-foot tube.....	Not perfectly clear.	Not perfectly clear. Faint yellow tint.
Odor when heated to 100 F.....	Very faint.	Very faint.
Chlorin in chlorides	1.4	1.9
Nitrogen as free ammonia.....	0.045	0.050
Nitrogen as albuminoid ammonia.....	0.0052	0.006
Nitrogen as nitrites.....	0.005	0.010
Nitrogen as nitrates.....	None.	None.
Solid matter	21.4	21.
Loss on ignition	3.0	4.6
Parietti's test in carbol-bouillon	Growth.	Growth.

Upon receipt of the above report the prison management requested that I visit Michigan City, collect samples myself and make a survey. Accordingly, as above stated, I went there May 24 and collected four samples from the lake. The report sent is appended:

INDIANAPOLIS, May 31, 1897.

Mr. Charley Harley, Warden Indiana State Prison, Michigan City, Ind.:

Dear Sir—I inclose tabulated statements of my analyses of the samples of water taken from Lake Michigan at the points named. Three of the samples, namely, 2, 3 and 4, are potable. (1) from the surface at 2,000 feet from shore, shows growth in Parietti's fluid, which indicates the presence of organisms dangerous to health. Both samples, surface and bottom, at 3,000 feet from shore, are shown by the analyses to be pure and wholesome. The prison management can not do better than to take the prison water supply from this point.

It is possible, however, for pollution to work its way to this part of the lake in stormy weather. If in the future the lake supply should become objectionable it could be rendered pure by filtration, and it is therefore recommended that the possible contingency of filtration be now considered.

For boiler use, water from the lake is quite perfect. Lake water will not make scale in any material amount, and will not corrode steel. Filtration does not remove corrosive and scale-making properties from water.

Very respectfully,

SECRETARY STATE BOARD OF HEALTH.

SANITARY WATER ANALYSES.

(1)

Sample—Surface, 2,000 feet from shore.

Parts in 100,000.

Appearance in two-foot tube.....	Specks and floating matter, faint yellow tint.
Odor when heated 100 F.....	Very faint.
Chlorin in chlorids.....	1.1
Nitrogen as free ammonia.....	.00
Nitrogen as albuminoid ammonia.....	.010
Nitrogen as nitrites.....	Faint trace.
Nitrogen as nitrates.....	Trace.
Solid matter.....	17.6
Loss on ignition.....	10.3
Parietti's test in carbol-bouillon.....	Growth.

(2)

Sample—Bottom 2,000 feet from shore, 18 feet deep.

Parts in 100,000.

Appearance in two-foot tube.....	No color, a few specks.
Odor when heated to 100 F.....	Faint.
Chlorin in chlorids.....	0.8
Nitrogen as free ammonia.....	0.007
Nitrogen as albuminoid ammonia.....	0.004
Nitrogen as nitrites.....	Faint trace.
Nitrogen as nitrates.....	Trace.
Solid matter.....	17.00
Loss on ignition.....	11.00
Parietti's test in carbol-bouillon.....	No growth.

(3)

Sample—Surface, 3,000 feet from shore, 26 feet deep.

Parts, 100,000.

Appearance in two-foot tube.....	No color, few specks.
Odor when heated to 100 F.....	None.
Chlorin in chlorids.....	0.7
Nitrogen as free ammonia.....	0.00
Nitrogen as albuminoid ammonia.....	0.001
Nitrogen as nitrites.....	Faint trace.
Nitrogen as nitrates.....	Trace.
Solid matter.....	16.6
Loss on ignition.....	7.0
Parietti's test in carbol-bouillon.....	No growth.

(4)

Sample—Bottom, 3,000 feet from shore.

Parts in 100,000.

Appearance in two-foot tube.....	No color, a few specks
Odor when heated to 100 F.....	None.
Chlorin in chlorids.....	1.0
Nitrogen as free ammonia.....	0.00
Nitrogen as albuminoid ammonia.....	0.003
Nitrogen as nitrites.....	0.00
Nitrogen as nitrates.....	0.00
Solid matter.....	17.8
Loss on ignition.....	2.2
Parietti's test in carbol-bouillon.....	No growth.

The expense of the analyses was borne by the prison, and the expenses of the trip by this Board.

Respectfully,

J. N. HURTY,
Secretary.

DAIRIES AT OSGOOD.

REPORT OF STATE HEALTH OFFICER TO STATE BOARD OF HEALTH.

Two gentlemen who requested that their names be not made public, gave information that the dairies at Osgood, Indiana, were in a bad sanitary condition. This led the Secretary to visit Osgood on September 23d and inspect the dairies named below. Capt. C. E. Heinbuch, of the Cincinnati Health Department, accompanied the Secretary, because Cincinnati receives quite all of the milk produced at Osgood.

DAIRIES OF W. D. WILSON.

Mr. Wilson has three dairies, "upper," "lower" and "Duncan Farm." In all 419 cows are milked. At the time of the visit, Sept. 23d, the drought had destroyed all the pasturage and the water supply was limited. The food was ensilage, bran and dry fodder. Later the rations included "gluten grains" from glucose factories. The cow sheds or barns have very low ceilings and are built around silos; the cows are held in stalls by stanchions and are very much crowded; wooden floors, with troughs or gutters at rear of stalls to receive manure; poorly ventilated, very unclean and untidy. Outside surroundings not as clean and tidy as should be.

Each animal was not inspected, but as a whole the herds appeared to be well nourished and healthy. Water supply is largely from artificial ponds.

Milking and Care of the Milk.—The milking is done by men while the cows are held by stanchions in the sheds. Cattle are not groomed, nor are bags and udders washed prior to milking. The milk pails are of heavy tin, hold about two gallons, and when filled are immediately taken to the milk house, where the milk is strained and cooled by passing it over an exposed cooler, and afterward is stored until shipping time in tall, heavy tin cans standing in ice water.

The milk house at the "upper dairy" is connected with the dwelling house. The storage boxes containing ice water are in a neat cemented cellar, and the water for scalding and rinsing is drawn from a well. At this place the milk is satisfactorily cared for. At the "lower dairy" the milk house was a poor shanty situated in the cow yard. The milk here was strained and cooled by passing over an exposed cooler and then stored in tall tin cans which were placed in ice water in covered wooden boxes which stood out in the yard. An old and very small wooden building situated in the cow yard, with a shallow, newly cemented cellar, was soon to be used for housing the wooden ice water boxes. The water at this dairy for cleaning the pails and cans was drawn by bucket and rope from a shallow dug well situated in a low corner of the cow yard. This well surely receives some surface drainage from the cow yard, and the underground seepage to the well is certainly contaminated with the cow yard soakage.

The "Duncan Farm" milk house is a small log structure having a shallow cellar, and is supplied with covered ice water boxes in which to store the milk while awaiting shipment. Here the milk is treated as at the other places. The water supply is from an artificial pond alongside the stable. The stable is higher than the pond, and being so near, pollution most certainly enters the pond.

Conclusions and Recommendations.—These dairies and surroundings are not sanitary. As said, they are all very unclean and untidy. The poorly ventilated and low crowded cow sheds are not wholesome. When together with this we consider the general uncleanliness, the fine appearance of the cattle is to be wondered at. The conditions altogether considered are calculated to cause disease and favor the spread of tuberculosis, if it should exist in the herd. When thus crowded together through the winter, with only an occasional release into the open air, it is almost impossible not to have tuberculosis. So we are warranted in saying that the tuberculosis test should be applied to weed out any tuberculous animals.

It is recommended that this Board issue an order to Mr. Wilson that he remodel his cow sheds, and provide at least double the cubic space to each cow now accorded. Also, that he be ordered to keep his cow yards and sheds in better sanitary condition; that he have the bags and udders of the cattle either washed or well wiped before milking; that he remove the milk house from the cow yard at the "lower dairy;" that he cease the use of the open cow yard well water at the "lower dairy" for cleaning milk vessels and for watering purposes, and that the coolers be covered when the milk is running over them in order to prevent wholesale bacterial contamination.

A. B. ASHMAN'S DAIRY.

The cow stable at this place is in the basement of an enormous barn, and eighty cows are milked daily. This barn has a stone foundation and is built upon the side of a low hill. The floor of the cow stable is of wood laid upon concrete, and a wooden manure trough runs the length of the stable at the rear of the stalls. Ventilation is by the windows in the stone walls and by wooden chutes leading from the ceiling through the barn above out through the roof; these were well stopped with cobwebs. The two rows of stalls face each other, with a space of eight feet between. In this space

is a track and car, by means for which food for the cattle is brought from an adjoining building containing a silo and stores of hay, fodder, bran and gluten grains. The cattle are secured by chains. The water supply for watering the cattle and for cleaning the dairy utensils is from an artificial pond. The water in this pond must be polluted, for it is plainly evident at one place that animals are led into the water to drink, and this, of course, introduces filth. The stable was not as clean as it should be.

Milk House.—The milk house is a stone-walled, stone-floored cellar beneath the ice house. The ceiling is covered with zinc and forms the floor of the ice house above. Ventilation for this cellar is through a door into an adjoining room furnished with a steam boiler and all facilities for straining and cooling the milk and cleaning utensils. The cow stables and yards are remote from the milk house, and fair cleanliness exists. The milking is done by men, but the bags and udders of the cows are not cleaned in any way before milking.

Conclusions and Recommendations.—The Ashman dairy can easily be put in good condition by practicing greater cleanliness. It is recommended that the Board issue an order directing that the air-chutes ventilating the cow stable be cleared of the obstructing cobwebs; that the stables and cow yard be cleaned and made tidy and so maintained, and that the pond be protected so that the cattle can not get thereto, water being taken therefrom for watering by pumps or other means, or better, if it is possible, that the water supply be from deep driven wells.

JOHN H. EHLER'S DAIRY.

This dairy is about five miles north of Osgood. Milks twenty cows. Stable yard very clean. Cow stable is a well constructed barn. No silo in the barn; sufficient space for each animal. Stable passably clean. Food is bran shorts, middlings, fodder and clover hay; animals secured by chains. Cow yard is in rear of barn and is clean. Milk house, a poor, wooden structure in front barn yard, was passably clean. Water is from a cistern from a house across the road and from a shallow well under a small hill to north of house. Milk cans are scalded and rinsed with cistern water at the house. Animals when at the barn are watered at the well. Mr. Ehler puts up ice from a small pond in a field near by.

Recommendations.—Mr. Ehler should have a new milk house. His old one is too dilapidated to be kept in sanitary condition, and he should have a good supply of deep well water.

F. LETZLER'S DAIRY.

Situated about four miles northeast of Osgood. Pasture at time of visit dried up on account of drought. Feed is ensilage, clover hay and bran. Milks twenty-four cows. Cow stalls in a well constructed barn, well ventilated, having a silo within. Stalls very unclean, barn untidy; space for each animal sufficient. Barn yard unclean, animals fastened by chains, cow droppings abundant everywhere. Milk house is a very poor wooden structure, situated in the barn yard, not sweet and clean, and cow droppings in close neighborhood. Water from a shallow well under the milk house. When they were in pasture they drank at a spring. Ice pond about 250 yards from the barn in a little valley. It was almost dry; hogs wallowing in it and ducks swimming around.

Recommendations.—Mr. Letzler should construct a new milk house somewhere outside the barnyard. A new water supply should be secured from a deep driven well and greater cleanliness practiced. Cow stables should be kept clean and bags and udders of cows washed or wiped off before milking. Although ice is only used to make ice water in which to stand the cooling cans, still it should not be taken from a hog wallow, for such ice is polluted and polluted water in which to cool milk is not sanitary.

ORDER OF THE BOARD.

Upon hearing this report the Board ordered the Secretary to see to it that all the recommendations above made be transmitted to the various parties concerned, and that they be ordered to put their dairies in first-class sanitary condition. This was promptly attended to by the Secretary, and the County Secretary of Ripley County now gives official information that all orders have been complied with.

NUISANCE AT EDINBURG.

EDINBURG, IND., Aug. 9, 1897.

Secretary State Board of Health:

Sir—I wish to call your attention to the slaughter house of Wells & Mickle of this place. It is in the northwest part of the town. They

have a steam tank to make a fertilizer out of the heads and bones of all the animals killed. Also, the blood pen is a working mass of corruption. The stench is so fearful that it is almost impossible to sit in our yard, and we have to close doors and windows of evenings to keep the stench out of our house. We have complained to our Board of Health time and again, but it does no good, so we would like for you to come or send some one to see it, so as to satisfy yourself. We can furnish you all the evidence you will require to prove its terrible nuisance. If you would come to examine it, Wednesday is the best day, as that is tanking day for them.

Hope to see you or hear from you soon.

Yours,

A. R. WRIGHT.

INDIANAPOLIS, IND., Aug. 14, 1897.

Mr. A. R. Wright, Edinburg:

Dear Sir—We thank you for your letter of Aug. 9, with its valuable information. We will write to the local Health Officer concerning the nuisance of which you complain and instruct him to see that the same is abated, if upon investigation he finds the conditions as stated. If the Health Officer refuses to act after inspection and you still consider that a nuisance exists which threatens the public health, you can yourself bring suit for abatement of said nuisance and for damages which might have occurred.

Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

INDIANAPOLIS, IND., Aug. 14, 1897.

W. A. White, M. D., City Health Officer, Edinburg, Ind.:

Dear Doctor—We have a complaint from Mr. A. R. White, of your town, concerning the slaughter house of Wells & Mickle. He says the place is a nuisance and threatens the public health; that the odors proceeding therefrom are offensive, and that life is burdensome in the neighborhood. Please examine into this and order abatement, if you find things as above stated.

Please send us a full report.

Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

EDINBURG, IND., Aug. 20, 1897.

Secretary State Board of Health:

Dear Sir—Yours of the 14th inst. noted, and in reply will say I had looked after those houses several days before I received your note, and the parties went right to work to clean up and put in some machinery that took several days to accomplish.

We have one of the healthiest towns in the State. Have had no epidemics of any nature for three or four years. One case of diphtheria reported yesterday in mild form, a child here on a visit from Indianapolis. I flagged the house at once, and it is at the out edge of town.

I shall report if anything presents that looks alarming.

Yours respectfully,

W. A. WHITE,

Secretary Board of Health.

GLANDERS IN WHITE COUNTY.

MONTICELLO, IND., June 11, 1897.

Secretary State Board Health, Indianapolis, Ind.:

Dear Sir—Would you please notify the State Veterinarian to come to Monticello to examine some horses in regard to glanders. The Secretary of the County Board of Health said to notify you. Would like the matter attended to as soon as possible.

Yours, etc.,

DR. SANGSTER, V. S.

Upon receipt of this letter the following was immediately sent to Mr. Levering at Lafayette:

Mr. Mortimer Levering, Secretary S. L. S. S. C., Lafayette, Ind.:

Dear Sir—We have information from Monticello, White County, that glanders exists near that city. Information is made by Dr. Sangster, V. S.

Very truly yours,

SECRETARY STATE BOARD OF HEALTH.

LAFAYETTE, IND., June 14, 1897.

J. N. Hurty, M. D., Indianapolis, Ind.:

Dear Sir—Your letter of 12th inst., reporting case of suspected glanders in White County, received. We have notified the State Veterinarian and he will give it immediate attention.

Respectfully yours,

MORTIMER LEVERING.

MONTICELLO, IND., June 19, 1897.

Dr. J. N. Hurty, Indianapolis:

Dear Sir—There has been a case of glanders reported to me by one of our veterinary surgeons, who has asked me to write you for instructions in the matter. I do not recall the name and address of our State Veterinarian or I would have addressed him. Had he not better come and see the case? Write me as soon as possible.

Respectfully,

J. J. HANMORE,

Secretary Board of Health, White County.

LAFAYETTE, IND., June 22, 1897.

J. N. Hurty, Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—We are in receipt of your favor of 21st inst., reporting case of glanders from White County, reported to you by J. J. Hanmore, M. D., of Monticello. The case will have immediate attention.

Respectfully yours,

MORTIMER LEVERING,

Secretary.

Sanitary Surveys of State Institutions.

INDIANA SCHOOL FOR FEEBLE-MINDED YOUTH.

REPORT OF SANITARY CONDITION. BY THE STATE HEALTH OFFICER.

The institution premises consist of a three-story brick and slate-roof building, with a capacity of about 500 inmates, with detached brick buildings for hospital, school house, boiler house and laundry, industrial building, barn and pump house; also, a detached one-story frame building, about 400 feet north of the hospital, used as a pavilion for contagious diseases. The above are situated on a tract of 55 acres, one-half mile north of the city limits of Fort Wayne.

Besides the above, there is a two-story frame building, with a capacity for 40 inmates and six employes, with the usual outbuildings, used as a colony farm, on a tract of 255 acres one and three quarter miles northeast of the main building. The institution also rents another farm lying north of its own. It has there a frame house with a capacity of about 15 inmates and help.

The ground upon which the main building stands is sandy and absorbant. There is good surface drainage in every direction, and all the grounds dry off quickly after rainfall. The building fronts the south. Owing to the construction of the eaves on the wings, some of the inside corner rooms are darker than is desirable. This darkness has been increased since the original construction by the erection of two large porches, used for the exercise of the lower-grade children in bad weather. These porches are excellent adjuncts in themselves, but not wisely placed. The building fronting south, the courtyards are not open to the sun, as they should be in all institutions, especially those for juveniles, defectives or otherwise abnormal inmates.

The dormitories, dining rooms, kitchens and domestic departments generally are fairly spacious and conveniently arranged. The two main dining rooms are particularly well planned, and have only one defect, namely, that they have no ventilation except by windows. The dining rooms and halls have tile floors, and all the inmates' parts of the house have walls painted on the brick without plaster.

There are 15 sitting or day rooms for the inmates, of which six are fairly spacious for the number of occupants, and are well ventilated. The other nine are decidedly overcrowded. Fortunately, these are occupied by the children who during most of the day are

in school, shops, domestic departments or other places, so that the overcrowding only lasts for brief periods two or three times daily.

The plumbing throughout the main institution is good. There has been no suspicion of sewer gas. From its occupancy the institution has been free from typhoid. The water closets, which in an institution of this kind are necessarily numerous, are all well flushed and well trapped. The hoppers are of various designs, including the Huber flume, the front washout, the automatic time flush, etc. When first built the institution was equipped throughout with porcelain hoppers. These, being liable to break and very costly to replace, are gradually being exchanged as breakages occur for porcelain-lined iron hoppers of good design. Porcelain-lined bath tubs are in use throughout, each dormitory having its adjacent bath room, with either one or two tubs, according to size.

The sewerage is well built and gives little trouble. It consists of castiron pipes, carried well outside the buildings, with convenient and accessible manholes, through which the system is flushed copiously and frequently. The main discharge is by an eighteen-inch vitrified sewer pipe to the St. Joseph River, about 500 yards away. The fall is of ample grade. The mouth of the effluent pipe is carried by an iron pipe from the river bank well out into the stream, its end being always below the surface, even when the water is lowest.

The greatest sanitary defect in the house, next to the overcrowded condition of some of the day rooms mentioned above, is that the ventilation is decidedly inadequate, and must always be reinforced by the use of the windows. When first built, a system of ventilation of the inmates' part of the house by means of suction fans, run by steam engines in the attic, was put in. It proved a total failure, and the fans have never been run after the first or second day. There are shafts for natural ventilation (so called) in most of the rooms occupied by the children, which, as such shafts usually do, work fairly well when the weather conditions are right, but they are inadequate in size and have no suction or pressure to help them. The ventilation of several of the rooms has been recently much improved, and is now fairly good, by means of natural gas orate fires placed in the flues which were built for ventilators. These rooms are used by the lowest grade of children, and are, as they should be for them, the best ventilated in the house.

The heating is by a mixed system of direct and indirect low-pressure steam radiation. The indirects are situated in the basement, and work fairly well. The steam heating is supplemented by natural gas grates in some rooms, especially in the front center.

The water supply at the main institution is from a system of driven wells about 390 feet deep. So far there has never been a water famine, but in the summer, when the city of Fort Wayne is using a great deal of water, drawn from its wells of equal depth about half a mile away, the vacuum gauge sometimes shows a dangerous level. The water contains some minerals, which stain the hoppers and wash basins, and when freshly drawn, gives off a strong odor of sulphur, which passes off if the water stands an hour.

Garbage is disposed of by feeding fresh to swine on the farm one and three-quarter miles away. The swine kept are many more than the swill will feed, and it is accordingly always fed up clean within 24 hours of being made.

The lighting is by electricity alone, the State owning its own plant.

A feature of this institution is its extensive play grounds, about 15 acres of the 55 upon which the institution stands being devoted to this purpose. When the weather is at all fit, the children are given as much life outside as possible. The important subject of dietary receives careful attention. A copy of the bill of fare for January, just as given to the cooks, is enclosed. The initial letters and numbers need explanation: "O and N" are the boys' dining rooms, "N" being that of the lower grade; "P and M," girls' dining rooms, "M" the lower grade; "A, F, G, and 1, 4, 6" are the youngest and the lowest-grade children; "E and 8" are the upper-grade custodials, about half of whom are epileptic.

The health of the children is usually good. Occasionally they have a few cases of malaria. Appended are the mortuary tables for several years past and abstracts of the physician's reports for the past three years. The average number in the hospital during 1897 has been about 15. The average number at the doctor's morning sick call has been about 30. This includes every little trifling ailment, which in ordinary conditions would not be brought to a physician, as well as the malingerers, who are more numerous in institutions for the feeble-minded than would be expected *a priori*.

It will be noticed that tuberculosis is a frequent cause of death.

As a large proportion of the inmates have a tubercular family history, it is supposed that is the chief reason for this fact.

The farm colony, known as Colonia, consists of about 50 of the more robust boys. Of these about 15 are of the more intelligent class and 35 are of the upper-custodial grade. They are employed chiefly in outdoor work—farming, gardening, lumbering, brick-making, etc., and are the healthiest and happiest of our inmates. The buildings are simple, even crude, but are fairly well adapted to their use. Being of frame, the house is only considered as a temporary expedient, and we hope to replace it by a substantial brick structure at an early day. The farm land is partly clay, partly of sand and loam. The water used by the inmates is from a well 87 feet deep.

In the medical report for the past two years what is said about the dental interne is of importance. It is believed this is the only institution of the kind where such an officer is on the staff. In most institutions the children's teeth are attended to only when they are suffering with toothache, but by this system the mouth of every child is examined annually and put in as good shape as practical, with considerable benefit from a sanitary standpoint.

A notable feature in the sanitary conduct of this institution is the attention which is given to physical exercise. Not only is every child taken into the open air every day and given general exercise, but in the sewing rooms and schools the children are rested every hour by taking them through calisthenic exercises lasting five minutes. The teachers and superintendents all report that most excellent results are obtained, the children being made brighter and more tractable.

No summer complaint, dysentery, diarrhoea or typhoid fever has ever been known here. This fact is considered as positive evidence that the water and milk supply is all it should be.

MORTUARY RECORD FOR THE YEARS ENDING OCTOBER, 1891
92-93-94-95-96-97.

	1891.	1892.	1893.	1894.	1895.	1896.	1897.	Total.
Attendance	358	411	423	459	479	506	538	.....
Tuberculosis	2	5	2	4	5	2	7	27
Pneumonia	3	1	1	1	.....	.....	.....	6
Status epilepticus	2	.....	1	2	1	3	3	12
Paralysis	2	.....	.....	.....	.....	.....	.....	2
Marasmus	1	.....	.....	.....	.....	.....	.....	1
Malignant osena	1	.....	.....	.....	.....	.....	.....	1
Enteritis	2	.....	1	.....	1	.....	.....	4
Convulsions	1	.....	.....	.....	.....	.....	.....	.....
Complication of diseases.....	.....	1	.....	.....	1	.....	.....	2
Congestion of brain .....	.....	1	.....	.....	.....	.....	.....	1
Cerebral meningitis .....	.....	1	.....	.....	.....	.....	.....	1
Erysipelas .....	.....	.....	1	.....	2	.....	.....	3
Bright's disease .....	.....	.....	1	1	1	.....	.....	3
Laryngitis .....	.....	.....	.....	2	.....	.....	.....	2
Endo-pericarditis .....	.....	.....	.....	1	.....	1	.....	2
Meningitis .....	.....	.....	.....	2	3	.....	3	8
Accident .....	.....	.....	.....	2	.....	.....	.....	2
Diphtheria .....	.....	.....	.....	.....	2	.....	.....	2
Pleuritis .....	.....	.....	.....	.....	1	.....	.....	1
Diabetes .....	.....	.....	.....	.....	.....	1	1	2
Uremic poisoning .....	.....	.....	.....	.....	.....	.....	1	1
Peritonitis .....	.....	.....	.....	.....	.....	.....	1	1
Total	14	9	7	15	17	7	16	85

NOTES ON MORTUARY RECORD.

Total deaths in seven years..... 85
Average number of inmates.....453.8
Average death rate per annum..... 2.77 per cent.
In the total deaths there have been—
Tuberculosis 28.23 per cent.
Epilepsy 15.3 per cent.
Meningitis 1 per cent.

Many cases of epilepsy are complicated with meningitis, sclerosis, etc., and the division between these cases on the record is often an arbitrary one. It would probably be more correct to attribute the death to epilepsy in each of these cases of meningitis and sclerosis.

SOUTHERN INSANE HOSPITAL.

ORLEANS, IND., August 2, 1897.

In compliance with your request of recent date, I visited the Southern Indiana Insane Hospital on the 19th ult., and beg leave to make the following report on its sanitary condition:

The capacity of the asylum is 400—males, 200; females, 200—but the institution is overfilled, there being at the time of my visit 206 males and 203 females under treatment.

In the male wards there were seven sick and twelve taking medicine. In the female wards there is one sick and six taking medicine. There is no case of acute sickness at this time.

The last official report gives a daily average attendance for the last fiscal year of 401, with a death rate of 3.5 per cent. of the total number treated during the year, counting from November 1, 1895, to November 1, 1896, which was only about one-half the mortality of the preceding year, it being 6.2 per cent., with an average daily attendance of 376 in round numbers.

There is a great demand for more room, there being at the time of my visit 225 applicants asking admission, some of them urgent. The parties for whom entrance is asked are in many cases confined in county jails and poorhouses.

There is just completed a new wing to the institution which will accommodate 250 additional patients when furnished, but there is no means at the command of the officers by which it can be furnished at this time, nor will there be before November next.

The great necessity for the room under the existing circumstances and its unavailability is a matter of regret on the part of the officers in charge, while they look forward with anxiety to the time when they may be able to give at least partial relief to so many of the distressed of our fellow-beings.

I am pleased to be able to report the asylum in so favorable a sanitary condition. Dr. G. C. Mason had but just entered on duty four days preceding my visit.

The retiring Superintendent, Dr. A. J. Thomas, was still in the hospital, but quite sick and unable to give any information, as I was informed. Dr. J. H. Clark, the assistant physician, was detailed to conduct me through the building, and was kind enough to give me the opportunity of examining in minutia every department

—each ward with its annexia—all of which were in perfect condition as to cleanliness and ventilation, as was also the wearing apparel of the inmates, which was as clean as it was possible to make it.

The tables, with their snow-white linen and well-arranged dishes, were truly inviting. The water closets had been supplied with tile floors recently, and were also so clean that there was hardly the smell of urine in them. The only deficiency found in the lavatories was the scaling of small particles of enamel from the sides of some of the bath tubs.

The kitchen and cold-storage rooms were all in a like satisfactory condition of cleanliness.

The food, so far as presented for inspection, was nutritious and of a good quality.

The fresh meats and vegetables were all preserved in cold-storage rooms, as was also the milk and butterine in a separate department. In passing, I would say that the information comes to me that our public institutions are all alike furnished with butterine in place of butter. I would suggest for your consideration whether it would not be to the interest of both the dairy and consumer to have a good article of butter furnished to these institutions, requiring it first to be inspected by a competent and honest judge.

The floors are all coated with paraffine to prevent the absorption of moisture, and are mopped every day. The entire side walls are washed down once or twice a year. The water supply is furnished from a double system of wells, which are capable of producing an inexhaustible amount of water, their capacity being estimated at a half million gallons per day. Of this quantity there is used by the asylum for all purposes, sixty thousand gallons per day, supplied by a double set of engines, one of which is in constant action, the other being held in reserve in case of accident or need of repair.

The wells are located at a distance of twelve hundred feet south of the buildings. The house pipes are furnished with a system of water traps, and by an automatic arrangement are flushed every two minutes. The main sewer pipe leads off in a southwest direction, having a good descent, and empties into an open ditch at a distance of 600 feet from the buildings and 800 from the wells, where it flows off in a westerly direction, and is diffused and absorbed in the adjacent country. This disposal of the sewage has caused dissatisfaction in the neighborhood of its disposal, and the Board of Directors have now under construction, and hope soon to

have completed, a system of tanks or vats into which the sewage is to be conducted and allowed to settle, after which it precolates a bed of sand and charcoal, passing on through pipes to a large dry well, where it is expected to sink after being thus purified. The sediment is to be collected, and after being pressed into cakes, it will be utilized as a fertilizer.

Ventilation is by the open windows, which are protected by heavy gratings. The building is well lighted by electricity.

There is ample provision for open-air exercise by the patients, when the weather will admit of it, there being fine groves both on the north and south of the building, with several small lakes on the grounds. All are permitted to participate in games in the open air that are disposed to do so and whose mental and physical condition will admit of it. There is also a gymnasium in which many take daily exercise.

There is no dairy belonging to the Asylum, the farms in the surrounding country furnishing the needed milk. At the present time milk is furnished by Mr. M. W., living five miles north of the asylum, whose dairy I visited in connection with Mr. C. McKinney, of Evansville.

We found the dairy in a very unsanitary condition, the stables being unclean. The water at which the cows drank was a pond which received its supply from the washings of a hillside in the direct line of the barnyard, where there was a heap of rotten manure and other filth. The herd consisted of 33 milch cows of all ages, many of them quite thin in flesh, but there was no manifest indication of disease in the herd. They were supplied with good pasture, but fed on fermented malt. The milk was set to cool in the milk cans, placed in tubs filled with water from a well in the yard, the tubs being placed in an old shed, filled in between the loose ceiling and weather boarding with sawdust, partly decomposed.

The milk cans were rinsed with water taken from an open cistern, at the corner of the kitchen, having a barrel placed in the opening to keep the children and dogs from falling in it, both heads being removed from the barrel. Such a condition of things would evidently be very unsafe should the family contract any infectious disease, such as typhoid or scarlet fever.

There should be instituted a system of inspection of each dairy herd from which milk is furnished to our asylums and hospitals by

a competent veterinarian, as often as twice a year, to secure such institutions against any danger of infection.

In conclusion, I would recommend that the Asylum should have its own dairy, at whatever cost.

In addition to the main buildings of the hospital, there should be furnished a sufficient number of cottage buildings to supply all the inmates who are laboring under contagious or infectious diseases, as also the more acute cases of mania or other sickness—such buildings to be placed at such a distance as to be secure from noise or contact. At present there are no means by which protection can be afforded the nonaffected. Cases of consumption are treated in the wards with others not affected. In the last official report there is reported four deaths from phthisis and 11 from tuberculosis. With the knowledge that now prevails on the subject of contagion, such a condition of things is nothing less than cruel.

Can we not prevail upon our lawmakers to remedy it by making an appropriation that will untie the hands of the Board of Directors and allow our State to stand with the advance in matters of sanitation?

I would be pleased to speak of some other matters of an esthetic nature that do not properly fall within the purview of this report, especially the assembly room, with its artistic pictures and fine music; the conservatory and walks, bordered with variegated and beautiful flowers, etc. But this I forego.

Respectfully submitted,

E. D. LAUGHLIN, M. D.

INDIANA REFORMATORY.

ORLEANS, IND., August 25, 1897.

In compliance with your request, I visited and made a sanitary survey of the Indiana Reformatory at Jeffersonville on August 20th, and herewith submit for your approval the subjoined report:

The sanitary condition of the reformatory, so far as cleanliness is concerned, is very good. The institution throughout is in first-class order in this respect.

The food is of good, nutritious quality and well cooked, and each inmate is furnished with all they care to eat. Twice a week they have for dinner boiled pork with vegetables; five days they have

beef, with a good article of vegetable soup; corn bread for dinner always and wheat bread for breakfast and supper, each kind of the best quality; coffee twice a day, of the Arbuckle brand.

Butterine is furnished here, as it is to all the other State institutions. I am informed by Dr. H. C. Sharp, the attending physician, that most of the convicts gain in flesh, if not also in health, upon the diet supplied here after remaining a short time.

The lavatory is supplied with 36 bath tubs, and as often as once a week at least each inmate is required to bathe thoroughly, when he is supplied with a clean suit of clothes throughout.

The work shops are very well ventilated by the open-window system, but the cells are very deficient in this respect.

There are three cellhouses, two of which are of ancient date and vary badly constructed. The cells are too small, with poor ventilation, and so arranged that the ventilation cannot be improved on account of the awkward manner in which the windows are placed in the outer walls. The third house is of more recent date, and while of bad construction, Mr. Hert, the present Superintendent, has had an additional row of windows placed in the outer wall so as to remedy the defect to some extent, giving exit to a part of the foul air above the cells. There are not enough cells to supply the demands of the prison, good and bad all told. There are quite a number of beds placed in the court surrounding the cellhouse, which is inconvenient, if not dangerous, to the institution.

A matter worthy of note here as a sanitary measure is the exchange of the old wooden buckets that have heretofore been used as night chambers in the cells for light iron vessels, the former having become so saturated with urea and excrement that they were very disgusting. This change was made recently by Mr. Hert, the Superintendent.

The present hospital arrangement is very bad, it being one large ward, with no convenience and ill surroundings. The engine room is in too close proximity to be comfortable, with a number of other defects that might be mentioned. There is no opportunity for, nor any attempt at, segregation, while the hospital reports show that there are nearly constantly cases of consumption being treated here.

But all this will soon be remedied by the construction of a new hospital, which is now under contract and the foundation laid. It is hoped that the building will be finished for occupancy by the

end of the present year. The last Legislature made an appropriation of \$17,500 for this purpose, and it will be money well spent.

The building is 45 by 90 feet and three stories high, the first story being sixteen feet and the second and third each 12 feet in the clear. It will have a shaft extending above the roof and all adjacent walls, through which it will be ventilated by the fan system, supplying both warm and tempered air through all the building. This will be changed as often as every eight minutes in all the wards and other rooms and every 14 minutes in the halls.

The corners of all the rooms and halls are to be rounded, so that no dust may accumulate; the floors to be of hard white maple, varnished with hard varnish. There will be a ward for contagious diseases and one for the more acute diseases, each of which are so arranged that they may be shut off from all the other wards, making them exclusive.

It will have its kitchen, dining room, laboratory, dispensary, lavatory, operating room, closets and morgue, besides the rooms for the accommodation of the nurses and attendants, with hot and cold water in every part of the building.

The present supply of water to the reformatory is procured from two deep wells within the grounds, which extend in depth below the bed of the Ohio River and furnish an inexhaustible supply of water, which appears to be of good quality. There are several large tanks placed upon the highest buildings, with pipes extending to all parts of the institution for use in case of fire, while the pumps produce an overflow of the main tank, where water is procured for culinary and drinking purposes at all times.

The grounds are supplied with open sewers, as are also the water closets, which are flushed often enough to keep them in good sanitary condition; the waste and sewage is conducted to one large sewer that empties its contents into the Ohio River near the Falls.

The number of inmates at the present time is 753 convicts and six officers proper, with 36 subordinates. Of all this large number of persons there were but two in the hospital, one with consumption and one with Pott's fracture, which makes a good showing for the health of the institution.

Dr. H. C. Sharp, the physician in attendance, gave the record of the hospital for the preceding month, giving 63 as the number that entered during July, a large proportion of which were for burns and other surgical cases. The largest number of those requiring med-

ical treatment for any one disease was 23 cases of malaria. There were four cases of pulmonary consumption, which, as before stated, were treated in the same general ward with all the other patients. They had but one death for the month of July, produced by phthisis.

The improvements needed here are many. The two old cell-houses should be torn down and new ones erected in their stead, with cells of larger capacity, with higher ceilings and arranged for better ventilation.

There should be a large central flue for the escape of the foul air, with a passage leading from the lower section of each cell into it, by which the foul air could make its escape.

Each cell should be supplied with some convenience for its occupant. A large part of the grounds in the inclosure is without pavement or other covering, which gives rise to much dust and is necessarily unclean and unhealthy. This should be remedied by putting down pavement of some kind. Concrete would be the most suitable for this purpose.

The dark, gloomy walls of the institution are repulsive to an extreme. They should be painted with a color that would absorb less heat and would present a more cheerful appearance to the inmates. Something of a drab, gray or straw color would, I think, be more suitable.

None but those confined for months and years within them, I apprehend, can tell the depressing effect that those gloomy piles of brick can have upon the moral and mental faculties and the amount of infelicity resulting therefrom.

If it is to be a reformatory, let us have it in a condition to reform. Everyone knows the moral effect that a bright and radiant home has upon the inmates, the tendency it has to develop and bring out the better qualities of the man.

The reformatory has no dairy, and consequently nothing of this kind to look after.

Respectfully submitted,

E. D. LAUGHLIN, M. D.

EASTERN HOSPITAL FOR THE INSANE.

Upon order of the Indiana State Board of Health, on November 12, 1897, I visited the Eastern Hospital for the Insane, at Richmond, for the purpose of making a sanitary survey and subsequent report. I met Dr. S. E. Smith, the Superintendent, who courteously extended every facility for an examination of patients and premises.

At the date of my visit there were under observation 518 patients; added to this number were 115 employees.

The buildings were in an excellent state of repair, the grounds well kept and very attractive. The heating and ventilation of the buildings require only the statement that they are satisfactory and present no objectionable features.

The water supply is excellent in quality and amply sufficient in quantity. Eighty thousand gallons is the daily demand.

The drainage, so far as the hospital is concerned, is not open to adverse criticism, but the sewage is conveyed into a small stream, rendering the water unfit for stock water as it passes through farms below the hospital.

Upon complaint of residents of Wayne County, the State Board of Health, on August 26, 1896, visited the hospital and found the stream a nuisance, and urged that measures be instituted for the abatement of the same. Your attention is called to this report, now on file in your office. (Report State Board of Health for 1895-6, page 176.)

During the year, as an addition to the hospital, there has been erected a rear central annex, used as a dining hall and kitchen, and affording additional apartments for employees.

It is universally conceded that where there is such an assemblage of persons necessarily in contact as are congregated in this hospital, a special building should be set apart for those afflicted with tuberculosis. In this instance it is impracticable, as will presently appear. The accommodations are already insufficient for those requiring admission. One in every 600 of the inhabitants of the State is insane, and in this district many have applied for admission who cannot be served on account of lack of room. A number of the most violent for want of room at the hospital, are confined in the

county jail. This state of affairs should not be continued, as it is a cruelty practiced upon the unfortunates and a detriment to the good order which should prevail at the jail. This hospital absolutely requires additional accommodations—a reasonable estimate would contemplate an expenditure of \$30,000.

There is not a vacant bed in the men's department, and no provision for the isolation of those suffering from communicable disease.

The 518 patients are now attended by 56 nurses, or each nurse has nine patients under control. One nurse to five patients insures the best management and resultant benefits to inmates.

In observing the wants of the hospital, as well as its excellencies, I discovered that the laundry capacity was deficient. Twelve thousand pieces of linen a week are laundered, and the present capacity should be doubled. Eighty patients assist in the work of the hospital, and with better facilities the number could be increased.

The value of the recent annex can hardly be estimated. Seventy per cent. of the inmates now repair to the dining hall and assembly room, and good order prevails.

The examination impressed me very favorably, and with the additions mentioned, I can conceive of no State institution better fitted to subserve the purpose of its construction and maintenance. The Superintendent I think peculiarly adapted by temperament and training for the position he holds, and to his careful, constant and skillful supervision the hospital owes its present sanitary excellence.

Trusting that the importance of the suggestions made in this report will impress you and command your favorable notice in your future communications to the General Assembly, I remain,

Very respectfully,

T. HENRY DAVIS,
Member State Board of Health.

INDIANA STATE PRISON.

The Indiana State Board of Health:

Gentlemen—In reply to your request for a report on the sanitary condition of the Indiana State Prison, the recent improvements and recommendations for further improvements, I submit the following:

Recognizing that the penal institutions of Indiana are rapidly undergoing a process of evolution for the reformation of her convicts, and teaching them to realize and to know that something more is being done for them than merely being guarded within a certain wall for a definite time and worked for the benefit of the state treasury, teaching them to realize that they are being cared for and treated for their criminal sickness; that the state is to be enriched by turning them out better citizens than they were when they entered this institution, rather than being vindictively detained simply to earn tribute for a state, and then turning them out on society with worse habits and characters than when received, as was frequently the case under the old system of managing penal institutions with no system of reformation. The obstacles in forming a correct diagnosis of the physical and mental conditions of the inmates are in some cases indeed difficult. A criminal who is capable of being reformed, who knows and recognizes the effort being made in his behalf, as an earnest, humane one, who will tell the truth about his symptoms and history, is easy enough to treat.

An incorrigible, who is at heart an inveterate enemy to society, and indulges in every device to impose upon society, will resort to the most ingenious and disreputable means to misrepresent to the physician of an institution as to his physical and mental condition, with the hope that he will be given the benefit of all doubts, excused from labor for a time until he can escape or defeat the objects of justice, before the physician can determine what a malingerer he is. When such rogues are detected in their impositions and confronted with an exposition of their deceptions, they will frequently deny everything with a sullen disposition, take the punishment with acquired stoicism and return sullenly to their work, apparently satisfied with "beating" the state out of their labor during the time.

Such inmates as these malingerers, as a rule, when released, turn into the same or some other institution, and then serve their lives in confinement on the installment plan. The malingerers or professional criminals are the ones which the indeterminate sentence holds for their full time and thus protects society against the expense of so many crimes and convictions.

THE INDETERMINATE SENTENCE.

The indeterminate sentence will protect the worthy inmate, who makes every effort to conform to the discipline of the institution and

acquire good and regular habits of a temperate life. He can then be released on parole, to be a comfort and support to his family or friends, feeling that the state has not been vindictive or revengeful in her punishment; but, by adopting reformatory methods, has returned him to society in an honorable and trustworthy way.

This dignified and honorable treatment commands his respect, and he redoubles his effort to lead a true Christian life, to the honor of the society of the state which has been so true to him and to his best interests.

THE GRADING SYSTEM.

In establishing here the grade system and putting in operation the indeterminate sentence law, that this may be a reform institution for the older criminals of over thirty years, it was very necessary that we have relief from the old hospital, which was an accumulated series of irregular rooms as ancient as the institution, and in the midst of the noise, dust and smoke of the factories, which work several hundred men. For want of space, several of the sick were necessarily kept in their cells, with the endless unnecessary annoyance of getting a true diagnosis, and with every advantage present for the professional crook to practice his deceptions, thereby working a hardship on the deserving inmate, as well as defeating the objects of the indeterminate sentence.

AGE OF INMATES.

The ages of the inmates here are over thirty years, with but few exceptions. This made imperative the demand for more hospital room. Our experience in the last nine months confirms our judgment that the death rate of this institution will be increased, as all prisoners who are over thirty years old will come here. Among that class of men we will find many old and broken-down constitutions. At the time of the exchange of several hundred prisoners between the Michigan City and Jeffersonville penal institutions, on April 12th, 1897, the flowers and fruit trees were in bloom at Jeffersonville; there was some snow about Michigan City, and two severe cold waves with snow were experienced here during the next thirty days. During this time several cases of double pneumonia developed, and several cases of pulmonary tuberculosis were broken down among the inmates received from the reformatory. The prolonged cold spring was the cause of much severe sickness and was responsible for six deaths.

WATER SUPPLY.

The supply of water during past years was received from shallow driven wells within the grounds. The grounds have been inhabited by from nine hundred to a thousand men for thirty years. The water proved to be very bad, and the analysis of the State Board of Health sustained the judgment of clinical experience with it.

The water was used only in emergencies, and increased our unsanitary conditions for those serving here either by choice or compulsion. The water so constantly corroded the steam pipes that they were continually bursting, and thus furnished a very uncertain quantity of heat for the cellhouses during the coldest weather, when it was so much needed.

Relief from this water system was sought from the last Legislature and an appropriation obtained to lay water mains into Lake Michigan, from which we get a full supply of sparkling, pure water. The institution now has as fine a supply of water as anyone similarly situated, which will surely continue indefinitely.

HEATING AND VENTILATING CELL HOUSES.

The poorly ventilated cells, for which relief was asked, has been obtained. A very complete system of ventilating fans of the latest and most approved pattern has been erected in each cellhouse. One set of fans force the fresh air through a mass of steam coils and distribute it along both sides of the cell block, while the impure air is drawn out of the system of cells and forced from the building. This gives a supply of properly heated air in every cell, a condition not found often enough in American penal institutions.

The heating and ventilating of the cells was, from appearances, not very seriously considered by the architects who designed them.

PURIFYING CELLS.

The accumulation of many years of whitewashing on the cell walls has been scraped off, and with it all the vermin and infectious bacteria.

The cells were recently given three coats of white paint, making a smooth surface, easily kept clean and pure with formaldehyde solutions. The clean cells, with the equalized temperature, fresh warm air from the ventilating fans, will add comforts only found in modern-built penal institutions, and will relieve the state of the responsibility of several deaths during each year.

SHOWER BATHS.

The new shower baths for the inmates is an improvement which must not be underestimated, when we compare it with tubs of water of an uncertain temperature during cold weather. Why such an improvement has gone so long undone can be better appreciated when we see the most rigid and penurious economy practiced, to make the appropriation carry through the year. The new baths are greatly appreciated by the men, and add one factor for better discipline.

THE FOOD.

The character and quantity of food served to the inmates is equal to that of other institutions. Barring an accident, the meals are always well cooked, and the meat supplied bears the government stamp. By a system of waiters each inmate gets all he wants to eat, whether it be half ration or two rations. This never allows the muscular laborer to leave the dining room hungry, and the feeding of each man all he wants (a custom not found in all penal institutions) adds very materially to the health, comfort and deportment of the inmates.

THE NEW HOSPITAL.

The hospital asked for, to get relief from the disadvantages enumerated, is nearly completed.

Its plan is that of a cross, with the four sections entering a rotunda. All partitions entering the rotunda are of glass. This gives a free view into each room, bath room and hall. This feature is a very desirable one for a hospital in a penal institution.

The long wing contains the hallway in the north side, for all sick lines to enter, with the offices on the south side for the sunlight. The offices facing the hallway are a private office, prescription room, drug room, operating room and laboratory. The kitchen occupies the north ward room on the upper story. This gives three ward rooms on the first floor and three on the upper floor. The basement is under the entire building. All heating apparatus is in the basement.

The fresh-air shaft extends above the top of the building, and a fan draws down the fresh air and blows it through the heating apparatus to all parts of the building.

PHYSICIAN AND DEPUTY WARDEN.

The work of the Physician and Deputy Warden in gaining and maintaining discipline is an harmonious work. Most impostors have a plea of sickness to get around the discipline, and for this reason the Deputy Warden's office and solitary cells are built as an annex to the hospital building.

The old solitary cells will be remodeled and have the noisy hot-water tanks removed and new solitary cells added, with a Deputy Warden's office combined. This arrangement will greatly facilitate the work of handling the incorrigibles and perfecting the discipline. All inmates who are conceited enough to imagine themselves "tough" and try to impose upon the Physician or Deputy Warden will always find both in the hall of the hospital. There they can be studied and examined with satisfaction and be prescribed for if necessary. If they are found to be malingerers they can be passed through the door leading into the annex and placed in solitary confinement. There they find a nice, roomy and well-ventilated cell. There they can rest comfortable, reflect, and finally realize that they are respected and treated as human. They can take their time under these circumstances and meditate in solitude, with hunger as a stimulus for a period of time, until they see that their course is wrong and that they must appreciate and reciprocate the dignity of the state and society.

THE BUCKET SYSTEM.

It is remarkable that so many institutions at this date have the abominable system of night buckets in the cellhouses.

It is simply impossible to have a pure atmosphere in a cell block where these buckets are constantly being opened by the hundreds of inmates. This bucket system is still in use here, and the appropriation of the last Legislature was not sufficient to do the plumbing in one cellhouse.

This leaves it for a future Legislature to give this relief and add another feature of reformation to the penal institutions of our state.

SHOP SEWERAGE.

There are no water closets for guards and foremen in the shops and only an open-topped bucket closet for the use of the inmates.

It will, in my judgment, require a special appropriation to extend the soil sewerage to each shop and place a flush trap for the inmates and one for the attendants. The demand for relief from the filth is imperative, and we cannot conceive why it has been neglected for so many years.

THE CRIMINAL INSANE.

The present facilities for the care of our criminal insane are wholly impracticable. Our insane can seldom be removed to the insane hospitals, but are detained here, where the proper care cannot be given them.

While our laws permit the criminal insane to be transferred to the insane hospitals, the laws are so embarrassed by the overcrowded insane hospitals that it is seldom an insane patient receives the benefit of it.

While most of the insane are left in their respective institutions, thus leaving the law virtually a dead letter.

I would respectfully suggest that a special ward be prepared at one of our insane hospitals or penal institutions for these unfortunates, then transfer these criminal insane there for the treatment they so sadly need and which cannot be given outside of a special hospital.

The state of Indiana is one of the few states that has no proper means of caring for this class of men, and while our humane state is striving to rank high in reforming her criminals and caring for her dependent subjects, it can no longer, with justice to her fair name, neglect this class of cases.

PROVISIONS FOR EMPLOYMENT.

The last Legislature passed an act to prohibit the contracting of prison labor in the future, and failed to provide any means by which the inmates may be kept employed.

The majority of men contracted here are working on contracts which will expire in another year. This will leave four hundred inmates by idle Jan. 1, 1898, and what to do is the question that now confronts the management of this institution. It is, indeed, a momentous one when we consider the consequences of enforced idleness among a large body of men.

During enforced idleness, with lack of healthy exercise and proper assimilation of food, anaemic conditions will result, secret

vices will be practiced and men of tubercular parentage will give way to tubercular inflammations, resulting in an earlier death, and an epidemic of insanity will appear with its terrors.

As this era of idleness comes the Warden will make every effort to overcome them by the endless routine of cleaning, polishing and recleaning the institution, and probably many other economical devices for employment, until the Legislature can give relief and turn the energy of the inmates to some more remunerative and healthy labor.

During this year the chapel building has been rebuilt, extensive additions erected for the administration department, a new and larger school room has been fitted, and new water mains from Lake Michigan laid, the cellhouses fitted with ventilating fans and a new hospital erected. With these extensive improvements and the grading of the inmates and the operation of the parole law, a marked improvement in the deportment and earnestness of inmates to conform to discipline is noticeable, showing that the inmates appreciate that the state is caring for and treating them properly by reforming and disciplining them to become good and useful citizens.

So strikingly manifest are these changes that the management has been revolutionized, that this institution may be the better enabled to perform the functions of reform institutions.

Very respectfully,

A. L. SPINNING, M. D.,
Physician to State Prison.

Michigan City, Ind., Dec. 2, 1897.

NORTHERN INDIANA HOSPITAL FOR THE INSANE.

The principal buildings of the Northern Hospital for Insane are thirteen in number. The administration building, eight buildings containing fourteen distinct wards for patients equally divided between the sexes, an assembly hall, a rear center building, a laundry and a boiler house, besides several detached buildings used for various purposes.

WATER SUPPLY.

The water supply is obtained from four wells drilled into the rock to depths varying from 150 to 618 feet, each provided with a sep-

arate steam engine and deep-well pump. The latter is located in each case about 100 feet below the surface. All are specially cased from the surface into the solid rock, in each case the casing extending to a depth of 150 feet. The deepest well has a diameter of eight inches, the others five and a half. Two wells are situated sixty feet apart at the boiler house and two a quarter of a mile distant one thousand feet west of the west extremity of the line of ward buildings, which are arranged in an east and west line along a ridge two thousand feet in extent, with intervals of fifty feet between.

There is a system of mains and branch pipes by means of which water for domestic supply and fire protection reaches every part of the hospital, on all floors, and fourteen outside hydrants. There is also a separate system of mains and branches for the distribution of drinking water, at a temperature of sixty degrees, wherever desired. The drinking-water system connects with either of the deep wells at the boiler house, so that in case of accident a constant supply of good drinking water may be had at all times. Surplus water from the drinking-water system passes into the domestic supply through a series of check valves in such a way that there is no chance of contamination of the former. A large duplex pump, located in the engine room, is also in connection with the water system for general domestic and fire purposes. This gets its supply from six-inch mains leading to two reservoirs—one adjacent to the boiler house and another two thousand feet south and fifteen feet higher than the pump, so that the latter fills under pressure, which fact greatly lightens its load of work in filling the general domestic mains. The reservoirs are filled from a creek four miles long which runs through the hospital farm. In seasons of drouth this supply is very scanty and inadequate, and at all times would be insufficient but for the wells which have been put down from time to time with a view to increasing it.

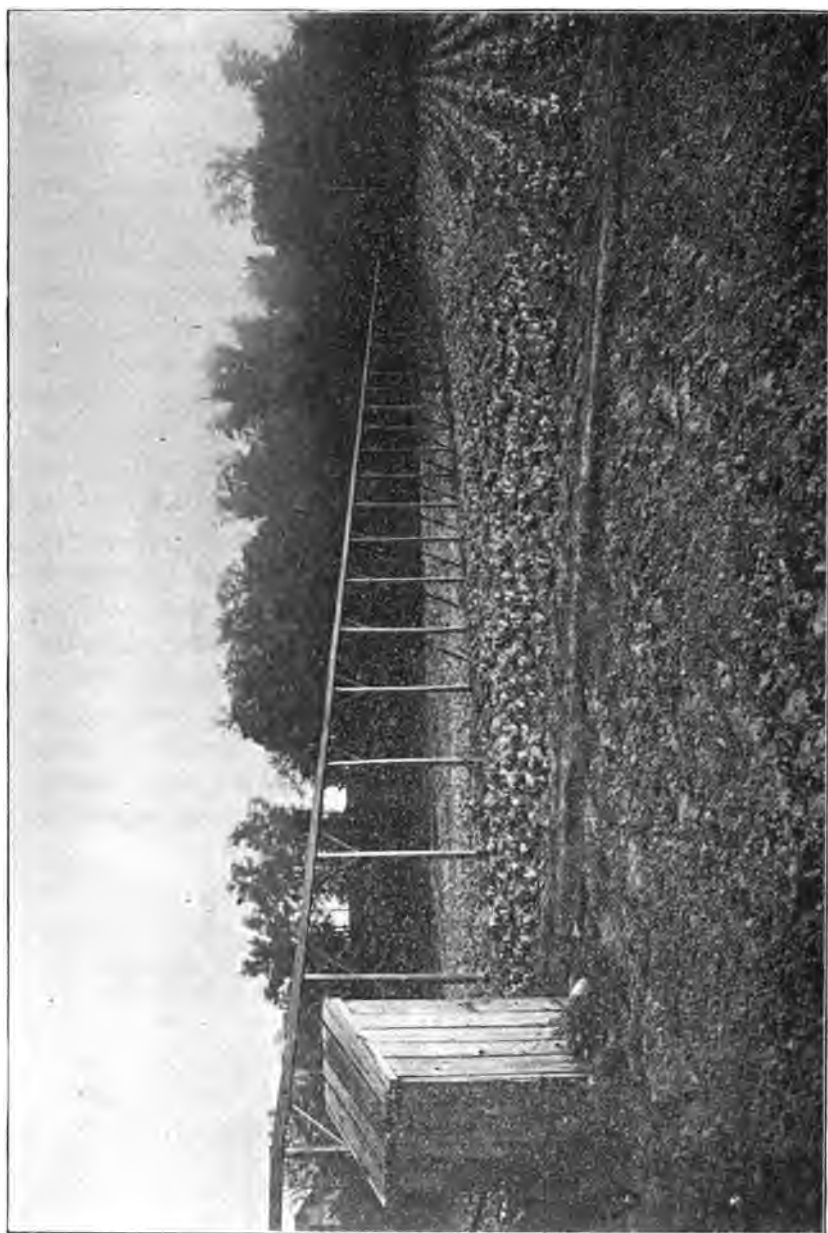
There is nothing more necessary in an institution than an abundant water supply, and notwithstanding almost annual additions since the opening of the hospital of devices in the way of wells and reservoirs and improvements thereon, it remains insufficient. The water for drinking purposes has been repeatedly examined from time to time, and has been found to be satisfactory, excepting when the demand is great and the pumps are forced an occasional murkiness is noted, due to the presence of *beggiatoa*, which is always

accompanied by a more or less sulphurous odor, which soon disappears on exposure. This is a minute vegetable organism, of the class Algae, and is in no wise detrimental from a sanitary point of view. It appears in the drinking water but rarely, and only under the circumstances above mentioned.

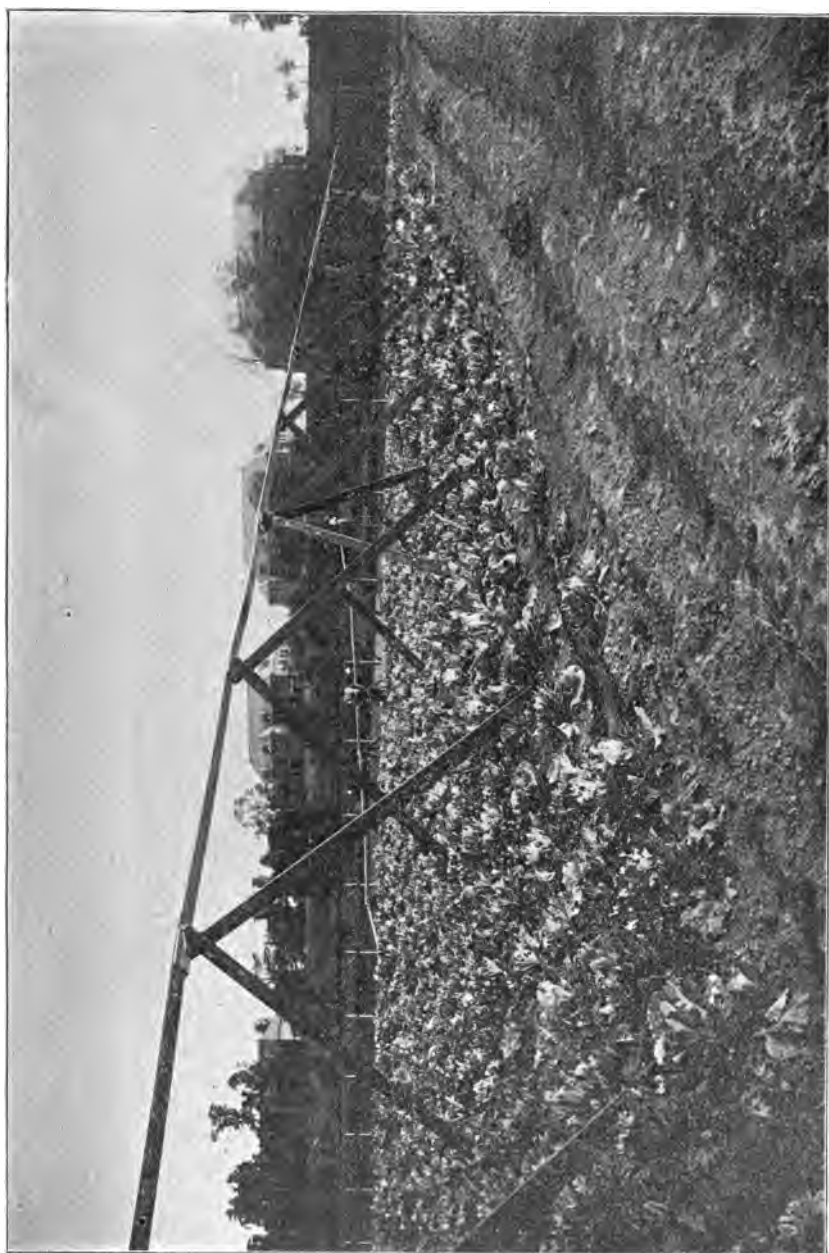
The hospital has been free at all times from typhoid fever, excepting two years ago, when for a few weeks there was a limited endemic, entirely, from all accounts, due to the use for drinking purposes of the domestic supply water during a period of four days when the drinking-water pump was temporarily out of use on account of murkiness communicated through water bearing crevices from the well sixty feet distant that was in process of being drilled. Casing was put down 150 feet deep in the new well as rapidly as possible, so as to cut off the communicating crevice. At the end of four days the usual drinking-water pump was again furnishing the supply. In the meantime general instruction had been issued to drink water which had been boiled. This was difficult to carry out, however, and the result was that in from ten days to two weeks typhoid fever began to appear. There were eleven cases and three deaths. Further investigation showed that several cases of typhoid fever had existed during the previous month about two miles distant in cottages near the banks of the creek before mentioned, in which no efforts had been made to disinfect discharges, and it is clear that the *bacillus typhosus* made its way into the creek and thence into the general domestic supply of the hospital, and the result was prompt. Since then no cases have occurred.

SEWERS AND SEWERAGE.

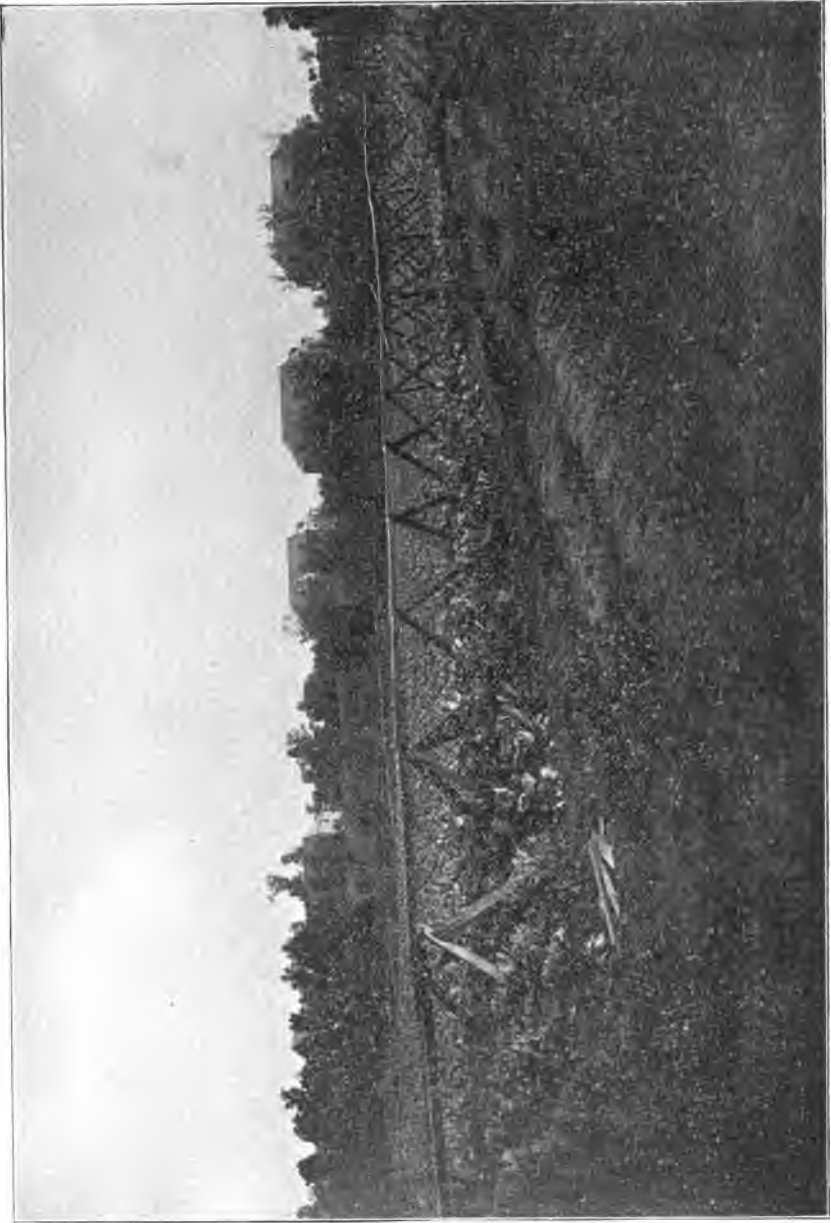
The main sewer of the Hospital runs westwardly through a swale south of the main line of buildings, is from six to ten inches in diameter and is provided at intervals with well-constructed inspection chambers, three by ten feet deep, built of brick and cement, with iron caps made to fasten securely, and intercepting gratings where needed. This empties into a secluded open ditch six hundred feet long, which in its turn empties into a catch basin for the interception of solid material. Thence the sewage may be directed through an eight-inch drain leading across the garden into the Wabash River, or may be directed into an elevated flume traversing the center of the garden, two thousand feet long, provided with



SEWAGE FLUMES ON SEWAGE FARM, LONGCLIFF.



SEWAGE FLUME ON SEWAGE FARM, LONGCLIFF.



SEWAGE FARM AT LONGCLIFF.

lateral, changeable outlets, by means of which, through portable troughs supported on cross-jacks, it may be distributed to the surface of the earth in sections almost throughout the entire garden, in this way furnishing, when necessary, a fertilizing, irrigated fluid to about thirty acres.

Parallel with this flume is a ditch running two thousand feet along the side of the cliff, from which side issues are opened to deliver the waste water over a large section of sloping ground on its north side. These two devices enable every part of the territory above mentioned to be reached by the sewage. This system has been in use for several years, with entire satisfaction, not only as a means of disposition of sewage, but as a means of irrigation, without which, at Longcliff, during the most of the years since the opening of the Hospital, vegetation would have been at a standstill during the midsummer months. As it is, enormous crops of all sorts of vegetables are produced yearly in spite of drouths, which in this section, according to weather reports and local observations made at the Hospital, as a rule, occur at least through almost the entirety of July, August and September. With the exception of the last two years, for eight years this has been the rule.

Along the open ditches and the flume and at distributing points little or no odor is observable when they are in operation, and what little there is is peculiar and by no means unpleasant. Moreover, it is not noticed except in the very immediate neighborhood.

During the winter, as a rule, the sewage is delivered into the Wabash River, but from early in the spring till late in the fall the irrigating flume and ditch are usually kept in active operation upon some part of the garden.

This is a modification of the long established system of intermittent filtration through soil. When a section of land is thoroughly soaked the water is carried to another section, and it is aimed to reach all sections about three times in the course of the dry season. In order to prevent packing of the soil, as soon as possible after irrigation it is loosened up with the cultivator.

The main sewers are connected with the various buildings by an ample number of branches from four to six inches in diameter, using sanitary Y's wherever practicable in order to facilitate the inflow.

SANITARY FIXTURES.

All soil pipes are four inches in diameter, extending through the roof from six to ten feet, surmounted by Globe ventilating caps to prevent the disturbing influence of high winds, and after passing through the foundation masonry enter traps of vitrified clay provided with bottom vents rising several inches above the turf immediately outside of the wall, stopped by a perforated removable disk, so that a complete circulation of fresh air may be had entirely through the soil pipe at all times and so that the plunger may be used by the engineer conveniently at any time for the purpose of forcing out stoppages in the branch. Waste pipes from sinks and lavatory benches are constructed upon the same principle; that is, bottom ventilation and complete circulation of air throughout from a point outside the walls below to a point several feet above the roof, Globe ventilators being used at the top. Such waste pipes are from two to four inches in diameter, according to requirements. At the bottom they all terminate in brick traps four feet long by two feet wide, laid in cement, of substantial construction, with wooden tops. These are arranged in such a manner as to intercept all lime soap and other material calculated to stop up the branch sewers. Once a month it is the duty of the engineer to inspect and remove all intercepted material, particularly the lime soap, which otherwise would frequently occlude the branches and require more or less constant excavation at various points. (The accompanying drawings sufficiently illustrate the construction of these traps. They have been found to be eminently satisfactory and better than any other means of interception.)

All soil pipes and waste pipes, before passing through the foundation walls, are equipped with P-traps, provided with a clean-out opening of ample size on the side of the most dependent part of the trap, the bushing and plug being of brass. It has been found that brass is necessary in order to prevent corrosion and immobility. The clamped-top clean-out opening is not used.

The water closets in the wards are equipped with Mott's flush-rim asylum hopper, which has an outlet of only two and three-quarter inches, in order to prevent the introduction into the system of bodies sufficiently large to stop the pipes. It may be well to state here, however, that no absolutely efficient means have ever yet been found to obviate the tendency of the insane to throw all manner

of articles into the hoppers, and it is said to be an every-day duty of the engineer's force to take out of soil and waste pipes objects so thrown in by patients. Pieces of clothing give more trouble in this particular than anything else. It is for this reason that an ample provision of easily used clean-out openings and intercepting devices has been found necessary. For purposes of flushing, Mott's automatic tilting cistern is used throughout the wards. These provide a flush of from three to five gallons as often as may be thought necessary. When the water supply is plentiful, they are set to flush every minute; when scanty, once in seven minutes. The Superintendent of the Hospital reports this to be the most efficient flushing system that has been introduced for hospital use. In the employes' quarters and administration building, various styles of hoppers are in use, in each case provided with a siphon of ample size operated by a pull chain. The lavatories throughout the Hospital are equipped with earthenware basins, with patent overflow, set in Tennessee marble slabs on stout wooden stands. Hot and cold water is laid on for each bowl. Rubber plugs attached by brass safety chains and the Fuller system of cocks are universally used, on account of facility and economy of repair.

Each ward has a bath room, equipped with a castiron tub lined with white enamel, Mott's French model, only four and one-half feet long, so as to prevent liability to total immersion, furnished with hot and cold water, with valves outside the tub, provided with detachable keys. There is also in each ward an enameled iron wash tub, with a cover, for washing small articles of clothing and other urgent uses.

The water-closet hoppers are used for slop sinks, also.

All supply and waste pipes, excepting soil pipes, are equipped with plug T's and crosses wherever there is a change in direction, instead of elbows, in order to facilitate internal clearance. In case a pipe be stopped up, it is only necessary to remove a plug and run a wire through the pipe in order to clear it.

Hot water is distributed to all wards and other buildings through a special hot-water system of pipes having its origin in a large Berryman heater in the engine room, which has been in satisfactory use since the opening of the Hospital, in 1888.

HEATING.

The buildings are all heated by indirect radiation, gold-pin radiators being used in all basements, closed with removable galvanized iron hoods connected directly with flues twelve inches square in cross section, smoothly plastered on the inside. Hot air is delivered into the various rooms through openings situated about seven feet above the floor. The steam for the heating system is generated in the boiler house, located in the rear of the central line of buildings hereinbefore described. Mains of ample size connect two batteries of boilers. 400 horse power *in toto*, through tunnels, with the radiators under all buildings. Pipes are thoroughly covered with nonconducting material throughout and are provided with expansion joints where necessary. The heating system is reported to be satisfactory. For heating purposes one-pound steam pressure is sufficient. Water condensation returns by gravity, having a fall of about fourteen feet from most of the buildings. Any one of the boilers may be used for power purposes, the piping being so arranged as to be interchangeable. Three boilers are usually required for heating purposes in midwinter. The capacity of the system is reported to be sufficient for the present.

VENTILATION.

Fresh air is admitted to the basements through the basement windows, is heated by the radiators above mentioned, is passed into the various rooms of the different buildings through the hot-air flues, and when cooled and more or less vitiated, finds its way through openings into ventilating flues, situated near the floor in every case, of the same size as hot-air flues. These rise with open mouths into the attics of the various buildings, and the used air finds its way out through dormer windows.

This system of ventilation, in the opinion of the management of the Hospital, could be very greatly improved and perfected by introducing the air into the basements through pipe conduits passing under or through the foundation from the outside and by placing two or more large Globe or Star ventilators on the highest points of the roof of each building, so that the use of basement and dormer windows might be abandoned. This is an important *desideratum*, for the reason that with each change of the wind a different set of

windows must be opened above and below in order to get the best results, both for heating and for ventilation, and this cannot always be done with sufficient promptness.

In this connection it is strenuously to be recommended that the basements of all buildings be properly and smoothly floored with cement, in order to facilitate cleanliness, to the end that the air furnished the inmates, which must enter by way of the basements, be of the highest possible degree of purity. It is to be regretted that the urgent recommendation made by the management of the Hospital to the last General Assembly in this particular was disregarded. It was noticed, however, in all wards that there was a remarkable absence of the usual hospital odor often found in institutions for the insane.

FIRE PROTECTION.

In the way of fire protection, each floor of each ward is provided with an inch-and-a-half riser, furnished with proper angle valves, to which are attached 100 feet of one-and-a-half-inch linen hose with a proper nozzle, always ready, on a folding rack attached to the wall near by. These lines of hose are kept in reserve to be used for fire protection only. They are frequently inspected and have been found always to be in satisfactory condition. No damage has ever been done them by inmates, and they appear to be as good now as when put in place eight years ago. This could not be said of rubber or rubber-lined hose. In the grounds adjacent to the buildings are located ten hydrants with two-and-a-half-inch standard outlets for connection with standard fire hose, of which about 1,000 feet is kept always ready on a very excellent reel in a small building devoted to this use. Fire axes and a good assortment of ladders are also kept in readiness. Almost since the first organization of the Hospital there has been a definite fire organization, with rules and regulations, which are well understood. Fire drills are had sufficiently often to teach all employes of the Hospital their duties in this relation. The assignment in the fire brigade depends upon the position which the employe holds. Ninety pounds pressure upon the mains may be secured in two or three minutes after an alarm and all risers in buildings may be cut off by bottom valves whenever necessary, in case of fire, to the end that a conflagration in any given building may not destroy the usefulness of the entire water system. The

water mains, as a rule, run through the basements of the various buildings, but they are laid in deep trenches properly walled, so as to practically render them safe from damage by fire or its results.

PROTECTION AGAINST INFECTIOUS DISEASES.

It is the rule of the Hospital, as promptly and as far as possible, to isolate all cases of infectious disease, including tuberculosis. For this purpose several rooms with bright, sunny exposure are used when necessary. Sunlight, cleanliness and aeration, with a reduction of furniture to the absolute minimum, characterize these apartments. Floors, walls and ceilings are frequently and thoroughly disinfected by or under the direction of a medical officer, and particularly after the conclusion of the case, before being again occupied. Formalin, in the form of spray thrown with a powerful hand pump, has been used in the Hospital for this purpose mainly for the last three years, although recently formaldehyde gas from a proper generator has been employed. Nitrate of lead is liberally used, both as disinfectant and as a deodorant against ammoniacal effluvia. This latter is reported to have the advantage of being relatively nonpoisonous, cheap and nonstaining, and therefore may be used on bedding, walls, etc., freely, without objection. Other disinfectants and deodorants are used for special purposes, but the above are principally depended upon.

THE MILK SUPPLY.

This is obtained from a highly graded herd of Holstein-Fresian cattle, which have been recently tested by Dr. Bitting, of the Purdue Experimental Station, at Lafayette, for tuberculosis, with satisfactory results in every case. The management is at present constructing a cold-storage house, to be equipped with special facilities for the more particular care of the milk product, in which it is intended to include the use of a separator and sterilizing apparatus as far as may be necessary.

The dairy stable of this institution, being practically a remodeled planing mill, originally used by the constructing contractors, is not what it ought to be. The cattle are closely crowded and the facilities for cleanliness are very insufficient. A roomy, substantial, well-arranged dairy barn, on the most approved modern principles, is much needed. The cattle, however, appear to be in good condition and have a good milk record.

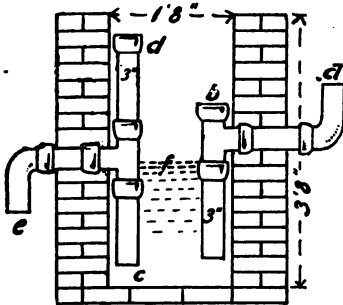
FOOD.

The vegetable food supply of the Hospital is almost entirely produced on the institution farm, is carefully looked after and is used in a fresh condition, and the quantity produced permits the selection and use of the best only. The specifications for meats are good, and every effort is made to secure compliance therewith. Only well-fatted steers, with a limit of 600 pounds to the dressed carcass, free of superfluous fat, and delivered at short intervals in refrigerator cars are used. Occasional contracts for local beef can be made with advantage. More frequently, however, Chicago is the source of supply. The meat seen in the store room was of good quality. Fresh beef constitutes more than nine-tenths of the meat supply consumed.

August 13, 1897.

DIAGRAMS OF GREASE TRAPS IN USE AT NORTHERN INDIANA
HOSPITAL FOR INSANE.

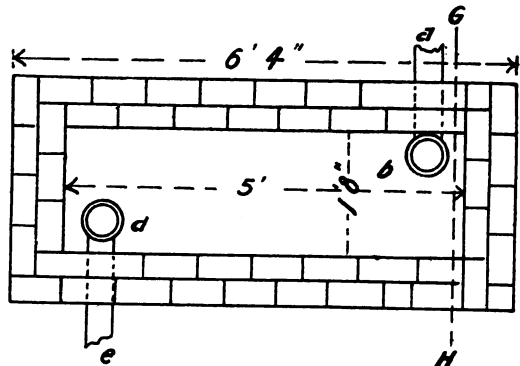
FIG. 1.



*Vertical Section
through Line 6-H,
Fig. 2.*

- a—Inlet opening.
- b—Ventilation opening.
- c—Outlet opening.

FIG. 2.



Plan.

- d—Opening to prevent syphoning.
- e—Connection with sewer.
- f—Grease (lime soap) line.

PROCEEDINGS
OF THE
SEVENTH ANNUAL CONFERENCE
OF
STATE HEALTH OFFICERS.

CALL FOR THE MEETING.

1897.

INDIANA STATE BOARD OF HEALTH.

SEVENTH ANNUAL CONFERENCE OF STATE HEALTH
OFFICERS.

The seventh annual conference of the Health Officers of Indiana will be held in Room 12, State House, at Indianapolis, Tuesday and Wednesday, May 11th and 12th. All county, city and town officers are urged to attend. The importance and value of this annual meeting cannot be overstated.

The county health officers who attend will please prepare a succinct account, for 1897, of their work, of the sanitary condition of their county and set forth its sanitary needs.

Besides the many interesting papers and their discussion, the conference will be given a reception, Tuesday evening, May 11th, by the medical department of the University of Indianapolis.

H. JAMESON, *President*.

J. N. HURTY, *Secretary*.

SEVENTH ANNUAL CONFERENCE OF STATE HEALTH OFFICERS
IN ROOM 12, STATE HOUSE, INDIANAPOLIS, IND., TUESDAY AND WEDNESDAY,
MAY 11 AND 12, 1897.

PROGRAMME.

First Session, Tuesday, 10 a. m. to 12 m.

Second Session, Tuesday, 2 to 5 p. m.

Third Session, Tuesday, 8 p. m. Reception and lecture at Medical College of Indiana.

Fourth Session, Wednesday, 9 a. m. to 12 m.

Fifth Session, Wednesday, 2 to 5 p. m.

Called to order by H. Jameson, M. D., President State Board of Health.
Welcome, Gov. Jas. A. Mount.

Response, L. H. Collins, M. D., Secretary Dearborn County Board of Health.

Roll call by counties to determine names of those attending.

Reports of Health Officers by counties, giving an account of work done, sanitary needs and suggestions.

Sanitary Management of Scarlet Fever, N. D. Cox, M. D., Secretary Owen County Board of Health.

Natural Gas in Relation to Diseases of the Eye, M. Jay, M. D., Secretary Jay County Board of Health.

Diphtheria in Columbus, Ind., Geo. T. MacCoy, M. D., City Health Officer.

Is Sanitation a Proper Function of the State? Jas. F. Hibbard, M. D., Secretary Wayne County Board of Health.

Health and Economics, Hon. F. J. Van Vorhis, father of health legislation in Indiana.

Management of the Milk Supply of Indianapolis, E. C. Clark, M. D., City Sanitarian.

Blood Diagnosis of Typhoid Fever, with Demonstration, Severance Burrage, Professor Sanitary Science, Purdue University.

Formaldehyde, with Exhibit of Apparatus, J. N. Hurty, M. D., Secretary State Board of Health.

TOPICS SUGGESTED FOR DISCUSSION.

The Sanitary Condition of the school houses. How may health officers bring about improvement?

Should the care of the health of live stock be imposed upon the health boards, or should it rest with a special commission?

How may health officers obtain more perfect reports from physicians?

Should Measles be quarantined?

Disposal of garbage and waste of the household.

Reception, Tuesday evening, May 11, 8 p. m., to the Conference by the Faculty of the Medical Department of the University of Indianapolis, at their new building, corner Market street and Senate avenue, opposite west entrance to State House.

SEVENTH ANNUAL CONFERENCE OF STATE HEALTH OFFICERS.

INDIANAPOLIS, May 11, 1897.

In the absence of Dr. H. Jameson, President State Board of Health, the conference was called to order by Dr. Davis, of Richmond.

Dr. Davis called for reports of health officers by counties, giving an account of work done, sanitary needs and suggestions.

Dr. Davis—Dr. Wilson, of Marion County, has studied these matters of county health action very closely, and I would like very much to hear from him, as he is right at home here as to what might be done and could be done.

Dr. Wilson—The work in Marion County, I think, is better known than it was a year ago. I think I can say that safely; but that it is what it ought to be is not true by any means. So far as the sanitary condition of the county is concerned, it is in fairly good condition. The water supply is far better than it was.

The greatest difficulty I have found is in the matter of statistics. It is difficult to get prompt and direct reports of births and deaths. We are getting better returns from outside the city of Indianapolis in Marion County than we did a year ago, perhaps twice as many. Of course, in the city we get most of them. We get all of the births and most of the deaths, but they are not reported as promptly as they should be. Sometimes the reports come two or three months after they should have come. I have written circular letters to the physicians two or three times, asking them to give more prompt attention to this work and send in their reports as the law intends they should, and I think they will improve in this particular. We are contemplating sending out a circular letter to the physicians of this county, that they might get together and devise some plan for getting these statistics in better. If we could all get together we could do a great deal more good.

Last fall I visited most of the public institutions. Of course, the report was made to the State Board of Health at the time. As I say, the work is not what it ought to be, but it is improving. I would like to see some action taken in regard to this matter of reporting births and deaths. It has annoyed me and has annoyed all

the members. It does not say when the physicians shall report to the health officer, and neither does it say when the local health officer shall report to the State Board of Health. I believe that if the State Board and the county and the city health officers would all work together it would do some good.

Dr. Griffiths, Lagrange—I am waiting for reports and watching for contagious diseases, and at the same time to get away with anything that may be prejudicial to the public health. I find some difficulty in getting reports of deaths. We have one or two physicians very slow about reporting anything, especially deaths. They take some pride in reporting births, but they think it is not so much to their fame to report deaths. I go through our newspapers and I collect all the deaths reported there that are mentioned. I put them informally upon my record, and then wait for subsequent events to give me an official report from the physician in attendance or the parties where the death occurs if there is no physician in attendance. Very frequently my record is left incomplete. I have everything except the name of the party reporting, and I simply say at the end, "Copied from newspaper."

Now, it has been suggested to my mind that if the undertakers in every town outside of the cities, and in the cities, too, be required to report every death to the health officer in whose jurisdiction he is, with the sex and cause of death, and, if practicable, the age, in that way we could fill up the void. It may do for us what physicians fail to do.

Then, again, if we could use some stringent measures—if we could, without getting ourselves into hot water all the time, enforce reporting by physicians, we would probably do better than we are doing. I get perhaps nearly all the deaths occurring in the county. I don't know that I get them all, but I have to be very vigilant in going after sources of information. They don't come to me; I have to seek them. Now, our physicians frequently say: "We don't get paid for this, and you have no right to compel us to do something for nothing." I say to them that the rules and regulations of the State Board of Health are equivalent to law. Now, if you do not report we will have to force you to do so. I sent one physician three requests this last quarter before I got his reports; I sent another three requests and got nothing from him. I had circulars printed, giving them two sections of the law. I have

been mailing them throughout the county, with the hope that they would respond, and I said in a note at the bottom that they should report within fifteen days after the occurrence of the birth or death. The gentleman who preceded me had permitted them to report at the end of the quarter. He was a little too lenient; he did not want to offend his medical brethren. I do not want to offend them either, but I have this responsibility upon me, and whatever is worth doing at all is worth doing fully. I think we come near getting all the births and deaths that occur in our county during the year. I think we get all the births, but not quite all the deaths.

I think the suggestion of the undertakers reporting could be carried out. We could get the reports pretty accurately in that way.

So far as contagious diseases are concerned, we have not had many to contend with this year, except measles, and measles have been epidemic in our county. There were three deaths in one family and two in another family. The measles were in a malignant form; death ensued very soon after the appearance of the disease. The deaths were all over fifteen years of age and under twenty-five. The young children who had the measles generally recovered.

Dr. Lytle, Marion—I have had considerable experience in coaxing, persuading and threatening some physicians for reports, and have summoned in one or two instances, and have always failed in getting a full report. I can get the births, but not the mortality reports. My prosecuting attorney told me the other day that he did not think he could prosecute under the law as reported and that he did not think we could make a case stick. The Mayor had decided against me in a case before, and I thought we might take it up to the higher courts and get a decision. Nobody seemed anxious to take it up. The prosecuting attorney saw no money at the end of it, and I did not care to make any more enemies than I had already made. I thought if the State Board of Health could get a decision from the Attorney-General and send it to the county health officers and let them distribute it to the local health officers, it would help us. Get the decision in plain language.

As to the undertakers making the report, I think that is the correct way to get at it. You can make the undertaker go to the physician to get the facts, and if there was a State law compelling every one in the State of Indiana to get burial permits, we could

get a very close estimate of the mortality of the State. But unless something of that kind is done, I feel that we cannot hope to get a correct mortality list. I do think, however, that if the Attorney-General would give us a decision, and let them have it fresh from his pen, it would have a good influence; I know it would in my town. It seems to be more neglect than that the physicians do not want to report. Say that they have a patient dead in the country three or four miles from town, and they may not go to his neighborhood again for a month or a year after his death, and they just neglect it and think that after awhile they will be called to the neighborhood again and will get the information. I would like very well to have a general expression from the health officers in regard to this matter.

Dr. Wall, Grant County—I am a health officer at this time. I served one or two terms eight or ten years ago as Secretary of the County Health Board. I thought a great deal at that time about the difficulty of getting death reports. I have thought a great deal about it during the quarter that I have served this year. I think we have no difficulty in getting reports of contagious diseases in our county. The physicians are almost universally willing and anxious to make reports of contagious diseases and take the necessary steps to quarantine and protect from their spread. I believe that the births are fairly well reported. I think Dr. Lytle will bear me out in that. The difficulty is always in getting the death reports. I do not think we get half the death reports of the county, and it is a problem that is a difficult one to solve under the statutes as they exist. I do not believe that under the present law it will ever be possible to enforce the reporting of deaths to the extent that you will get anything like an accurate death report. The difficulty does not arise from unwillingness to report, but from the inconvenience. As has been suggested, it isn't an extravagant supposition that a doctor may treat a case ten miles in the country; the case dies in his absence; doctors are not usually on the ground at the time of death. Well, he has nothing to call him back in that neighborhood or to that family; perhaps does not see any members of the family for a year. It is a hardship under the law to require that physician to drive that distance for the express purpose, and for no other, and without compensation, to get that death report. I am free to say that I would feel that it was an injustice; that I was doing my

brother physician an injustice to prosecute him and compel him to go to that inconvenience to get that report. I believe, as was suggested by some one who has preceded me, that if the matter of reporting deaths was left to the undertaker you would come nearer getting the number of deaths. I see the difficulty arising there in getting the cause of the death if you depend on the undertaker. I have thought if there was some compensation for the physicians getting their reports it would have a happy effect in bringing them. At all events, if we have to depend upon the physicians getting those reports that involve the inconvenience I have spoken of, I think it will be very difficult to enforce it. The undertaker is there; he can get the family history, find out the cause of the death and make the report without any particular inconvenience. This difficulty does not come up in the case of births. They have blanks and can get the facts at the time, but the problem of getting a complete record for future reference in deaths is a difficult one, and I am in favor of some plan that will make it easier.

Dr. Cox, Owen County—I presume the experience of one officer is the experience of all on the question of getting death returns. I presume a physician thinks it reflects upon his skill to lose a patient. In some cases the patient may die in his absence, and it is a hardship for him to go and get the returns, and so, from one cause or another, reports of deaths are absolutely worthless under the present law. I see no way out of it unless we have a new law on that subject that will force the undertaker to get the report and give it to the health officer. The difficulty in my county in getting reports of births and reports of contagious diseases is slight, but when it comes to the question of deaths, I am satisfied I don't get one-half the correct reports. Sometimes it is necessary to deal with some physicians with an iron hand, especially in contagious diseases. In November of last year diphtheria broke out in our county, and our whole township became infected. Soon patients began to die. Of about 80 cases reported in the township 14 or 15 died. However, physicians were made to understand the gravity of the situation. Meetings were held by some of the leading people in the township, and I had the situation explained to them as well as I could, and I instructed both the people and the physicians how to control the disease, and in two months it was eradicated. One physician I had

to have fined, and since that time he has been willing to make his reports. There is only one way I can see to get correct reports of deaths, and that is to have undertakers get burial permits before they can bury any body.

Dr. Hanmore, Monticello—I have found the difficulty in getting these reports the same as the gentlemen who have preceded me. In addition to this difficulty, I have found in our county that there is an antagonism existing among physicians in regard to reports of contagious diseases, and I am at a loss to know how to rectify this difficulty. I have surmounted one of the greatest difficulties I thought a health officer could meet with; that is, the trouble which exists between the health officers and the people. But when it comes to health officers and physicians, and the feeling which exists among physicians themselves, I am at a loss decidedly how to act. In one of the towns in our county we have had trouble with scarlet fever for two years, and diphtheria intervening, and one of the greatest troubles is that there are no two physicians who will agree. If one physician happens to be called to a case in scarlet fever or diphtheria, if he will pronounce it the disease that exists the other physicians will laugh at him and say there is no scarlet fever or diphtheria there—it is simply a case of some simple disease. Some of them I have known to say a case of scarlet fever was nothing but scarlatina, and well-developed cases of diphtheria they would say was not diphtheria, but follicular tonsilitis. We physicians know what that is, but laymen don't. They will say they do not have to report these diseases; there is no danger there.

In regard to the death reports, I have received at least ten birth reports to one death report. Why that is I cannot tell. I know there are many cases of deaths that could be reported without any great trouble on the part of the physician, but whether it is negligence or whether it is on account of fear of getting a record of reporting too many deaths—that they are unsuccessful and that their brother physicians will accuse them of being negligent in losing so many patients, I do not know, and the only way to cure it is to require the undertaker, who is bound to recognize all these cases, to make the report. If a man has a death in his family he is bound to have the undertaker. By a little work he can go to the attending physician and receive from him a certificate and refer

that to the health officer. I believe that is the only way we can arrive at a correct solution of the problem of reporting deaths, and I cannot see, after studying this question from all sides and from every quarter, where we can make a success and get anything like correct death reports in any other way.

I will have to refer to this assembly about the question of getting reports of contagious diseases. In our city during the last six months we have had five times the number of cases of measles that have been reported. One reason is that there are a great many of these cases where they do not call in a physician. I have known families where from four to six have been afflicted with measles, and no reports of any kind have been made. If any person here can solve that problem, I would like to hear him.

Dr. Bence, Putnam County—Of course, people are alike all over the State, so there is no need of bringing up the question of death reports. The only way to do is to require burial permits. Undertakers cannot be compelled to make these reports. Still, that is not the greatest duty nor the most important duty of the health officers. What worries me most is letting them die. The man who will permit only one to die where two died before is the best health officer we have in the State. While I try to get correct reports, my chief fight is to prevent these people from dying from contagious and infectious diseases, and I try to get the moral support of the community. I think I have got them to understand the necessity of prompt measures. During the most infectious period of measles the patient is often on the streets and in public places, and people don't know that he is infected. A great many people are infected in this way. Where I live a great many people send their children where there is measles and let them get them, because they dodged them themselves when they were young and got them when they were older. They think everybody has to have the measles, and therefore it is difficult to quarantine them. We have had an epidemic of measles this year, and I have not reported a case. I have taught the people that they must quarantine against diphtheria and scarlet fever, and the people recognize the fact and pay respect to the flags, and we put the flags on every house.

As for the deaths, we try to get them, but the main fight of the county health officer is to fight contagious and infectious diseases.

We had an epidemic in one little town and had flags on half of the houses in the town, closed the schools and ordered the children off the streets, and stopped the epidemic, and stopped it quickly. I am sorry we cannot get complete reports, but I cannot do it in twenty days, and I think the State Board of Health made a mistake in requiring it. I have some slow physicians in my county, and although I have sent them all cards, it is a month or more before I get the reports, and they have to come in the wrong place in the reports. I think we will have to worry along with the death reports as they are until we get a law requiring the undertakers to get burial permits.

Conference adjourned until 2 o'clock p. m.

AFTERNOON SESSION.

Conference called to order by Dr. Laughlin at 2 p. m.

Address of welcome by Governor Mount—It was said many years ago, "All that man hath will he give for his life." Surely, life must be dear to a man and health must be dear to a man, if he give everything for it. It is said that Jay Gould at one time was congratulated over his magnificent success in business and the great fortune which he had accumulated. He pointed to a man of robust physique, who was a brakeman on one of his great trunk lines of railroad, and said: "All my fortune would I exchange for the digestion of that man." He prized good health more than all his accumulated fortune.

Beautiful environments and fertile soil do not count for as much as a healthy locality. Men in selecting homes select them with more regard to healthy environments than any other condition. Happiness cannot be enjoyed without good health. No neighborhood, no State, can attain the greatest possible success without good sanitary conditions. It is absolutely necessary for our success, for our prosperity, as well as happiness, that we have healthful conditions.

Gentlemen, you sustain a very important relation to the State of Indiana. Into your keeping is committed in large measure the sanitary conditions of our State. Pure water, pure food and pure air are necessary requisites to good health, and it seems to me that these conditions become more important with the lapse of time.

Our rivers are contaminated by the sewage of cities, and many of these rivers become the water supply for our towns and cities. Shallow wells in many of our towns become little less than cess-pools of impurity. We find that these are important conditions, and it is time the attention of our State was directed to these conditions, and this is a part of the work of the Health Board of our State. These are great problems, and the people of the State of Indiana should be interested in the work that they have committed to your hands and to your keeping.

I might bid you welcome; that would be a mere formality. Better than a welcome extended on my part will be the approval of the people, and that welcome which will come from the hearts of the people as they understand that you become important factors in the prosperity, happiness and good health of our State.

I trust, gentlemen, and I believe, that you will give that attention to these important questions—the questions of counteracting the spread of infectious and contagious diseases and a careful preparation of vital statistics—so that the people may be thoroughly posted on the question of health and how we can improve the sanitary conditions of our State. These are important questions, and I believe that they are committed to good hands, and I believe they will receive at your hands fair and careful investigation, and I believe your work will be so well performed that the people of our great State from their hearts will bid you welcome to the Capital City. We feel a deep interest in your work, and hope that good results will come to our people and to our State from your work and your investigations.

Response by Dr. Bence, Greencastle—The Governor is a man of a good deal of acumen, because he spoke highly of us. I feel that all these important things he spoke of have been committed to good hands, and I admire his acumen in recognizing it in so short a time. He said that somebody had said that everything he had he would give for his health. That is only when he is sick. When he gets well he nearly always forgets about it. You know it has been said: “When the devil was sick, the devil a saint would be; but when the devil was well, the devil a saint was he.”

These secretaries of the Board of Health do hold a good deal in their hands, and we have control of the people's destinies more than most people think. There are two of the chief pleasures of life that

we control, or that we should control. I believe it was Pope who said that

"Reason's whole pleasure, all the joys of sense,
Lie in three words—health, ease and competence."

We thank the Governor very kindly, and are glad that he appreciates our efforts.

The following resolution was introduced by Dr. Griffith:

Resolved, That each undertaker in the State of Indiana be required to report to the health officer in the city or county in whose jurisdiction he resides the death of every person whose burial he may superintend, giving the name, cause of death, age and sex of such person.

Motion seconded and carried.

Dr. Cox's paper read.

SANITARY MANAGEMENT OF SCARLET FEVER.

BY N. D. COX, M. D.,
Secretary Owen County Board of Health.

Of the acute diseases, which are exclusively transmitted through the human body, scarlet fever, in its relation to the health of the race, holds first place, since the frequency of smallpox, through protective measures, has been reduced to a minimum. Scarlet fever is generally recognized by a diffuse eruption over the body, with an angina of more or less severity. It is highly infectious, and when in the stage of desquamation the fine branny-like scales infect rooms, clothing, furniture, and, in fact, everything else with which it comes in contact. In all probability, the infection is confined to the period of "scaling off," as it is called, and if strict antisepsis and isolation be rigidly and intelligently enforced in all cases, mild or malignant, there is but little doubt that the disease could be stayed in its course, and many lives, great suffering and often an impaired condition for life would be avoided. To this end, instead of wearying you with a tedious history of this dangerous disease of childhood, I propose to devote a few moments in as practical a way as I can to the very important question of how to manage cases of scarlet fever so as to prevent its further spread.

As said in the beginning, the scarlatinous virus surpasses any other eruptive fever except variola in its tenacious attachment to objects and its portability to distant localities.

The disease factor, the infective agent, is as yet unknown. That the disease is due to some form of micro-organism there can be no doubt, and that it may be figured as being a minute form of life. The lesion of the kidney appears to be due to some poison produced in the body during the disease. One of the most marked features of the disease is the predisposition which it entails to the incursion of pathogenic germs other than those we believe to cause the disease itself. Thus, an infectious, croupous inflammation in the mouth, tonsils, larynx and trachea, due to a streptococcus, is a frequent complication. True diphtheria, due to the 'Löffler bacillus, is also prone to establish itself upon the vulnerable inflamed mucous membrane.

One attack of scarlet fever, like smallpox, protects the organism for life against the infection. Exceptions to this rule are rare. Among the peculiarities of the infective material is that it may attach itself for months and years to clothing, bedding, house utensils, furniture, books and walls of dwellings and all other objects with which it comes in contact. The usual methods heretofore employed in the disinfection of rooms, furniture, books and clothing have been, in a majority of instances, of no avail whatever and powerless to destroy the germs of the disease. We can only depend on freeing from the infectious material those articles of attire and furnishing, by the most rigid antisepsis and isolation of the patient, and the use of such agents as science has brought to our notice on all objects that have been exposed to the poison.

It being granted that the infectious material may be carried in the clothing and in books, so also must it be deemed possible for adults, healthy people, physicians and all others who have been in contact with the disease to carry the germs on the hands, in their hair and clothing. Cases of this kind are by no means rare where the infection has been carried in this way. A case comes to my mind of the long life and the highly infectious nature of this disease.

Several years ago an epidemic of malignant scarlet fever invaded my town. Many children died. In a family where all had the dis-

ease, and in which two died, the clothing and toys of the baby were put away in a box or trunk and securely fastened.

Several years after, and in another house where scarlet fever had never been, another child was born in the family, and after it grew to be nearly two years old the fond mother opened the trunk and allowed her last born to play with the toys of its dead sister. In the usual time it was stricken with malignant scarlet fever and soon succumbed. Smith, in *Disease of Children*, relates that a "librarian of a circulating library of a Sunday school, whose pupils came largely from tenement houses, was occupied a considerable part of a day in covering and arranging books. After about the usual incubative period of scarlet fever he sickened with the disease. His two sisters were immediately removed to a rural township, three hundred miles away, and to an isolated house where scarlet fever had never occurred. About one month after his recovery, and after his room had been disinfected by burning sulphur and his bed clothing and linen had been thoroughly washed and all articles suspected to hold the poison had been disinfected or burned, the brother visited his sisters in the country. Three weeks subsequent to his arrival one of these sisters sickened with the scarlet fever, and a week later the other also. It seemed that the exposure must have occurred several days after his arrival in the country from some book or other infected article in his possession."

Such histories and experiences are not infrequent. They are common during epidemics of scarlet fever. They indicate an extraordinary attachment of the scarlatinous poison to objects and show it is not gaseous nor readily volatilized.

The fact of its portability and of attaching itself to objects carried long distances; that the poison is a fixity; that it is a germ, and that almost to a certainty the poisonous principle is confined generally, if not always, to the fine branny scales, and that the danger lies entirely in the period of desquamation, makes it criminal for physicians and nurses to neglect in the least strict quarantine and rigid antisepsis; for in these precautions, intelligently and systematically enforced, lies the only hope of eradicating this highly infectious and dangerous disease. In the present state of our knowledge, the most reliable and certain prophylaxis is the isolation of patient and nurses and the thorough and judicious employment of disinfectants upon their persons and in the apartments. All furniture

and articles not absolutely required should be removed from the sick room, and no one should be allowed to enter it except the medical attendant and the nurses. Constant ventilation should be insisted upon by raising the lower sash of the window a few inches in mild weather. Even in stormy weather sufficient ventilation can be insured in this way without exposing the patient to currents of air, which should be avoided. The temperature of the room should be kept at about 70 degrees. Articles used about the patient, such as sheets, pillow cases, blankets or clothes, must not be removed from the sick room until they have been disinfected by placing them in a tub of boiling water in which carbolic acid and sulphate of zinc have been added, or in corrosive sublimate, one to one thousand. They should be soaked in this for at least one hour and then again placed in boiling water for washing. A piece of muslin one yard square should be dipped in this solution or saturated with formaldehyde and suspended in the sick room constantly, and the same in the hall or doorway leading to the sick room. Vessels used by the patient should have some of the fluid constantly in them, and immediately after being used by the patient, emptied and cleaned with boiling water. Water closets where the discharges are emptied should be disinfected from day to day during the illness by lime or zinc. All straw and feather beds should be burned and the last should never be replaced. An old feather bed handed down from generation to generation is an abomination in the sight of all sanitary nations and peoples. Old sterilized cloths should be used about the patient instead of handkerchiefs, and when once used should be burned. The patient should be kept well anointed with carbolized vaseline or Lysol and vaseline, as it not only serves to allay the intolerable itching, but serves the double purpose of rendering the fine branny scales heavy, thus preventing them from flying about the room, and also probably destroys, to a large extent, the infectious principle of this disease. The physician, before entering the sick room, should anoint his face and hands with the above ointment and should put on a closely fitting gown and hood. After coming out he should remove them, place them in a close-fitting bag in which is a piece of cotton saturated with formaldehyde. He should wash and disinfect his hands and face before leaving for his office or home or to visit other patients. The nurses should use the same precautions, and before leaving the house

should take a bath, with a complete change of clothing. After convalescence is fully established, and after there has been complete desquamation, the rooms, clothing, furniture and everything else that has been in the least exposed to the scarlatinous poison should be thoroughly disinfected. Probably the best, cheapest and safest germ destroyer is the new disinfectant, formaldehyde. Because of its cheapness and simplicity in using, boards of health are generally recommending it. Perhaps all we are told in its praise is not entirely warranted, but enough is proven to establish its high value in this direction.

A REVIEW OF THE RECENT EPIDEMIC OF DIPHTHERIA IN THE CITY OF COLUMBUS, IND.

BY GEO. T. MACCOY, M. D.,
Health Officer.

To the President and Members of the Indiana State Board of Health and Health Officers of the State of Indiana:

Gentlemen—I have the honor to present to you to-day a paper upon the subject of diphtheria, as it manifested itself recently in the city of Columbus, Ind.

A review of the literature of diphtheria is simply impossible, and a partial review to an audience composed of sanitarians would be out of place.

To those of you who have the time I can suggest nothing more interesting than a review of the literature of diphtheria for the past decade. You will find much to learn, many things to unlearn.

In this paper I shall avoid, as far as possible, all reference to text-books or other medical publications, and confine myself strictly to the results of my own observations.

HISTORY OF THE EPIDEMIC.

During the months of June and July, 1896, we had an abundance of rain, so that all the streams in this county were kept full. Still, there were no ponds of stagnant water anywhere.

Beginning with the last week of July the weather became very hot, and continued hot through the greater part of August.

From about the 1st to the 15th of August this city and the surrounding country were infected with great swarms of flies, so much so that a house without screens was almost unendurable. Horses hitched on the streets, unless protected by netting, became frenzied and unmanageable. Farmers ceased plowing on account of the annoyance of the flies to their teams. All kinds of stock suffered from these pests.

About the 17th of August the flies disappeared, their exit being as sudden as their advent.

During this time and immediately following children were annoyed a great deal by sores on their hands and feet and occasionally on their faces or some portion of their body unprotected by clothing. Persons whose occupations kept them out of doors suffered more than those indoors—boys more than girls (on account of bare feet), and children more than adults. These sores were pustular in character and bore a close resemblance to the pustule resulting from vaccination with impure virus. The slightest scratch or abrasion, burns or other injuries to the skin would become inflamed, and soon the characteristic pustule made its appearance. The accompanying constitutional symptoms were general malaise, headache, vomiting, rigors, fever and in some cases glandular enlargement. A boy aged 10 years received a superficial burn on his hip. In a few days this slight lesion was covered by an exudate that both in appearance and odor resembled diphtheria. Constitutional symptoms were present, and a diagnosis of diphtheria was made, although no throat lesion existed. Antitoxine was given to this patient, with results locally and generally the same as in typical diphtheria. A culture test verified the diagnosis, and another child in the same family, with no other exposure, contracted well-pronounced faucial diphtheria six days later.

With the appearance of diphtheria the number of cases of pustular dermatitis diminished, but the disease still continued, and was frequently found associated with diphtheria in the same family and occasionally in the same individual.

Was this pustular dermatitis diphtheretic, and did the vast swarms of flies have anything to do with its causation or propagation?

I may remark in passing that hog cholera made its appearance in this county in about ten days after the advent of the flies, and in

many parts of this State diphtheria and hog cholera prevailed extensively at the same time. While these diseases may possibly bear no relation to each other whatever, still the carrier of the poison of the one may at the same time be a carrier of the poison of the other also.

Diphtheria spread over the southern part of the State in a steady, wavelike manner, striking Columbus with great force. It made its appearance in this city August 14th, the first case being well-marked naso-pharyngeal diphtheria. This case was quarantined at once; there were no exposures, and no one contracted the disease from it, no other case occurring in that part of the city, and as soon as the patient was well enough the family moved out of town.

There were no other cases until August 24th, but from this date to the 31st sixteen cases developed, not one of them seeming to have any connection with any other case, although pustular dermatitis existed in some of these families prior to the advent of diphtheria.

From this time the epidemic steadily increased, in spite of every effort to check it. During the month of September 65 cases developed in the city, and it prevailed extensively in the surrounding country.

In the Eleventh Annual Report of the State Board of Health the following statement occurs: "An outbreak of an infectious disease extending beyond its first victims unchecked is an evidence of neglect or ignorance of duty by local boards (of health), inexcusable, because a knowledge of methods of prevention or control and the legal power to enforce regulations to those ends have been abundantly provided." When the author of the above statement knows more of diphtheria he will modify his language. I cannot plead guilty to the charge of either ignorance or neglect of duty. I knew my duty, and dared to do it.

The city of Columbus was clean when the epidemic made its appearance (no city of its size was cleaner), and it was kept clean during the epidemic.

AN OUTLINE OF THE GENERAL MANAGEMENT.

Upon receipt of information at the Health Office of a case of suspicious sore throat (whether the legal report was made or not), I immediately visited and carefully examined the case. If it was

thought to be contagious or was doubtful, strict precautions against the spread of the disease were taken at once. Inquiries were made as to the number of persons in the family and the number of possible exposures. The patient was isolated and explicit instructions for the care of the room and the protection of other members of the family were given. When it was possible, other children of the family were sent away from home.

The patient was placed in a clean, light and well-ventilated room (upper rooms being preferred), and all unnecessary articles of furniture removed. One person was selected for nurse and no other allowed to enter the room, the nurse wearing an outside wrapper, which was removed if it became necessary to leave the room. (The plan recommended by J. Lewis Smith for purifying the atmosphere by the use of oil of eucalyptus, carbolic acid and turpentine was tried, but was finally abandoned, as it was proven to be unreliable.)

Stone jars holding from two to five gallons were placed in the room or adjoining closet and filled with solutions of chlorinated lime, bichloride of mercury or other disinfectants, and all dishes, vessels, knives, spoons, etc., were dipped in the disinfectant solution before removing them from the room. Cloths were used to receive the discharges from the throat and nose, and immediately burned. Urine and feces were disinfected before removing from the room. All bed linen or clothing was first immersed in the disinfectant and then boiled.

Printed copies of the law governing quarantine and health circulars giving advice for preventing the spread of diphtheria, for disinfection, etc., were left with the family. Quarantine was absolute, no one but the physician being allowed to enter or leave the premises, and before taking my leave the house was properly flagged. The wants of the family were looked after by sanitary police, whose duty it was to visit each quarantined family each day, and as much oftener as required. By this arrangement and the aid of telephonic communication each family was well looked after; the hardship of quarantine was scarcely felt, and there was no excuse for any other communication with the outside world. Where families needed assistance from the Township Trustee it was rendered through the medium of the Health Officer and the sanitary police. No one complained for lack of attention. After the death or recovery of the patient the premises were disinfected according to the

rules of the State Board of Health (recently promulgated), and I made it a part of my business to see that said rules were carried out to the letter.

Funerals were strictly private, and always within twelve hours. Undertakers were not allowed to use "cooling boards." Neither cabs nor hacks of any kind were used to carry dead bodies, and the preparation of the body for burial had to conform to the rules specified by the local Board of Health in every instance.

A clean bill of health was not issued in any case before the end of the third week, and the patients were always carefully examined before releasing them from quarantine.

While the schools were in session daily examinations of pupils' throats were made. The teachers were carefully instructed how to do this. Wooden spatulas were used for depressing the tongue when necessary, and when so used were immediately burned. Every case of inflamed or reddened throat was promptly sent home and the name and address of the pupil sent to this office. No pupil was allowed to return to school without a certificate from their family physician (approved by the Health Officer) stating that no contagious disease existed.

Children from families where any kind of sore throat existed were not allowed to attend school, and no sick children from any cause allowed to remain in school.

School rooms were thoroughly disinfected each week, slates abolished, desks, pencils, banisters, etc., washed in solutions of chlorinated lime; books were not taken away from the school rooms; circulating libraries were closed.

Early in the epidemic I learned that many otherwise excellent physicians had very little knowledge of disinfection, and that the people could not be trusted to carry out the instructions of the attending physicians. For this reason I assumed charge of sanitary matters and strictly carried them out, always being careful not to interfere in the least, by word or act, with the work of the attending physician, and, with one exception (to be mentioned hereafter), there was perfect harmony between the physicians and the Health Officer. A health officer can do his whole duty and never meddle with the affairs of any other physician. As a proof of this statement, I take a pleasure in recalling the fact that the practicing physicians in the city of Columbus, without my knowledge or solici-

itation, united in a memorial to the Mayor and Common Council fully indorsing my work as a sanitarian and asking said Council to appropriate sufficient funds to reimburse me for loss of time and money while looking after the interests of the city. This memorial was signed by every physician in the city save one. This was a kindness that no health officer can afford to forget. And to the credit of the City Council, be it said, the request of the physicians was granted. A pecuniary token, with a vote of thanks, was tendered to the Health Officer.

I have been criticised for not closing the schools. The schools were not in session when the epidemic began. The opening of the schools did not increase the number of cases in the city. No case of diphtheria could be traced to the schools, and 82 per cent. of all the cases occurring while the schools were in session had no connection with the schools whatever. School children seemed to belong to a preferred class. The schools were closed on the 25th day of November, and at the same time all public meetings were prohibited. Still, the disease continued, the last case being reported January 13th, 1897.

SOME OF THE CAUSES HELPING TO PROLONG THE EPIDEMIC.

This being a year of political agitation, large crowds were "very much in evidence" in this and other cities. Especially was this the case in the months of September and October. These crowds assisted in spreading the disease by bringing together the people (of all ages) of the country and city, and the mixing together of infected and noninfected individuals. Mild cases of the disease and individuals from infected houses mixed freely with the throng upon the streets and in crowded halls. Each political "rally" was followed by a fresh outbreak of the disease. The "tin-horn nuisance" was a factor. One boy contracted the disease and died as a result of blowing a horn belonging to his chum, whose throat "was too sore to blow." No doubt, there were other cases contracted in the same way. It was for this reason that the blowing of horns upon the streets was prohibited.

The city market also contributed, as it is now known that butter made on farms where diphtheria existed was sold in market in this city. Many cases came to the city from the surrounding country, no less than eleven cases originating in this way during the month of November.

"The laws, methods," etc., so abundantly provided by the State Board of Health (heretofore) were totally inadequate and inefficient to protect the city from the surrounding country.

Were physicians responsible in any way for the spread of the disease? In so far as they failed to recognize and report mild cases of the disease they helped to prolong the epidemic. The houses in which the unrecognized and unreported cases occurred were never properly disinfected, and remained in centers from which infection was and is still liable to spread at any time. There was some carelessness, also. I was present in one instance where the attending physician, wearing a full beard, placed his ear to the chest of a patient that had on a woolen night robe much soiled by the discharges from nose and throat and vomited matters. The physician left the house without even washing his hands.

In a few instances householders attempted to conceal the disease, not even calling a physician, hoping thereby to escape quarantine. One such case proved fatal within 24 hours after its discovery by the Health Officer. The physician (?) sometimes assisted the householder. I received written notice in one instance "to remove the flag from Mr. Blank's residence at once." A week later it was observed "our flag is still there."

After the presidential election and the disappearance of the crowds the epidemic steadily declined. There was a total of 190 cases reported to this office, not including atypic or anomalous cases. Each of these cases I visited more than once and made a careful examination at each visit. In many cases several visits were made, so that in addition to the cases specially treated by myself I had a personal knowledge of all cases reported.

The disease varied in intensity from cases that were mild to those of extreme malignancy. Neither age nor environment was respected. It visited the homes of the "well-to-do" as well as the haunts of poverty. Thirty-eight cases were over 15 years of age, the oldest being 63 (and a physician); the youngest, 11 months of age. (There were a number of unreported cases of rhinitis, with mucopurulent discharge and glandular enlargements, probably diphtheretic). In the majority of cases the diagnosis was based upon clinical evidence alone, culture tests being reserved for doubtful cases or where dual infection was suspected.

The diagnosis of diphtheria is not difficult in the majority of instances, but I am free to say that in the absence of properly conducted culture tests the diagnosis in many cases is well-nigh impossible. The disposition of physicians to hold on to that older conception of diphtheria, i. e., that it is "always an inflammation associated with the formation of a false membrane," often leads into serious error. The sooner we recognize the fact that diphtheria can and does exist in the absence of any visible membrane, the better for those entrusted to our care.

In every disease of childhood, but especially in diphtheria, the physician should be something more than a clinician. If not an actual bacteriologist, he must be in touch with the most recent work in bacteriology. Several cases of fatal diphtheria during this epidemic were contracted by associating with cases where no characteristic membrane could be demonstrated, and culture tests revealed the presence of the bacillus diphtheriæ in reddened throats that 24 hours later developed a typical membrane. Typical cases of follicular tonsilitis became diphtheretic without the formation of a membrane, showing conclusively that during the prevalence of diphtheria "all sore throats are dangerous." This fact can not be too forcibly emphasized. The term "follicular tonsilitis", is responsible for many deaths. Epidemics are prolonged by the failure to recognize mild cases, and the physician who depends on clinical evidence alone in making a diagnosis will sometimes make this mistake. It is impossible to study diphtheria without the aid of bacteriology.

Culture tests were made in thirty-one cases. Of this number eighteen showed the presence of Loeffler's bacillus alone. Nine cases examined showed the presence of Loeffler's bacilli with streptococci, and four cases streptococci only. All cases of mixed infection were examined later than the third day, while cases in which Loeffler's bacilli only were found were examined earlier. Three of the cases of mixed infection and three cases of strept. diphtheria were complicated with pustular dermatitis. One fatal case had a diphtheritic patch surrounding the anus the size of a silver dollar.

There were three cases of scarlatinal diphtheria, and one case of diphtheretic conjunctivitis.

The location of the membrane was as follows:

The tonsils in.....	59 cases.
The tonsils and pharynx in.....	82 cases.
The nares in.....	2 cases.
The tonsils, pharynx and nares in.....	31 cases.
The larynx, primarily and secondarily, in.....	16 cases.

Twenty-eight cases proved fatal, a mortality of 14.7 per cent. The mortality in two former epidemics ('92 and '93) was 20 per cent. and 25 per cent., respectively.

Causes of death:

Twelve cases died from invasion of the larynx.

Eleven cases from general systemic poison and sepsis.

Five cases from heart failure.

Four of the croupous cases and three cases of heart failure were also septic.

(I will omit complications and sequelae.)

A discussion of treatment or cure of disease is hardly a proper subject to bring before a body of sanitarians, but at the present time a paper upon the subject of diphtheria that did not mention antitoxine would be disappointing. I have a few statements to make upon this subject, and will allow each of you to formulate his own conclusions. Owing to the bitter opposition to the use of antitoxine that existed in Columbus in the beginning of the epidemic, permission to use it could not be obtained except in the gravest cases, and only then as a last resort. This prejudice was largely removed before the end of the epidemic. Still, antitoxine was not used as a remedy except in cases that were unusually severe.

Antitoxine was administered to fifty-two cases, many of them considered hopeless as far as any other treatment was concerned, all of them severe.

Of these fifty-two cases nine died, a mortality of 17.3 per cent. Five of the nine deaths occurred in less than twenty-four hours, three deaths under six hours. Deducting these moribund cases, we have four deaths remaining, a mortality of 8.5 per cent. In none of the nine fatal cases was antitoxine injected prior to the fifth day. In forty-two cases injected prior to the fifth day all recovered. There were no disagreeable sequels following its use; no cases of reinfection, and no case of croup developed after its use.

Nine laryngeal cases injected, with five deaths; a mortality of 55 per cent.

Seven laryngeal cases, not injected, all died; a mortality of 100 per cent.

Besides these 52 cases I furnished antitoxine for use in 19 cases out of the city, with one death, and that in six hours after the injection and the sixth day of the disease.

TABLE OF CASES OF DIPHTHERIA TREATED WITH ANTITOXINE.

AGE.	Cases.	Recovered.	Died.	Mortality Per Cent.	Moribund, or Dying in 24 hours.	Mortality, Per Cent.
Two years	4	4	.....	.....	.....	.....
Three years	4	3	1	25	1	.....
Four years	5	5	.....	.....	.....	.....
Six years	3	3	.....	.....	.....	.....
Seven years	7	3	4	57	.....	.....
Eight years	9	6	3	33 $\frac{1}{3}$	2	.....
Ten years	6	5	1	16 $\frac{2}{3}$	.....	.....
Eleven to nineteen years	14	14	.....	.....	.....	.....
Total	52	43	9	17.3	5	8.5
DATE OF ADMINISTRATION.						
First day	19	19	.....	.....	.....	.....
Second day	16	16	.....	.....	.....	.....
Third day	6	6	.....	.....	.....	.....
Fourth day	1	1	.....	.....	.....	.....
Fifth day	2	.....	2	100	.....	.....
Sixth day	5	1	4	80	2	.....
Seventh and eighth day	3	.....	3	100	3	.....
Total	52	43	9	17.3	5	8.5

Of the nine fatal cases, an unfavorable prognosis was given at the time of injection in all. Seven were considered hopeless, as far as any other treatment was concerned. One lived one week after injection, and died from a pre-existing heart lesion of two or more years' duration, and one was a case of reinfection injected on the sixth day of the second invasion.

Mulford's antitoxine was used and in the following amounts: In six of the fatal cases 1,000 units were used in each case; in two of the fatal cases 2,000 units were used in each case; in one of the fatal cases 800 units only were used. In 43 cases that recovered, from 1,000 to 2,500 units were used in each case.

The city health officers should carefully examine their city ordinances and see whether they are prepared to fight an epidemic or not. If the sanitary code is incomplete, determine exactly what is lacking, and then, with the aid of the city attorney, draft an ordinance covering the desired points. Talk about it to the Mayor and one or more members of the council, and be present and present the ordinance at the first opportunity, and in nine cases out of ten it will be passed at once. The rules of the State Board of Health are all covered by ordinance in this city, and are therefore easier to enforce. Columbus was the first city in the State to enact an ordinance placing membranous croup upon the list of contagious diseases, and during the recent epidemic it was classed the same as diphtheria.

I heartily indorse the "special rules" governing physicians and health officers when visiting persons sick of contagious diseases, etc., as adopted by the State Board of Health, October, 1896. I fail to find anything unreasonable in them. I had been using an outfit nearly identical with the one recommended by the Board, and found it very satisfactory. I am sorry to say that these rules were not very generally complied with. Many doctors do not take kindly to innovations. While approving the work done by the State Board of Health (knowing the difficulties under which they were working), there are conditions still existing that something should be done to remedy. The inefficient quarantine and general carelessness upon the part of physicians, and people in country districts especially, make it impossible for one county to protect itself from an adjoining county. While the strictest enforcement of quarantine and careful management were observed during our epidemic, still Columbus was at the mercy of the surrounding country, and is yet. Cannot something be done to compel the people to regard the warnings sent out from time to time by boards of health, and to stir up the careless physician to a sense of his responsibility? There are many unnecessary deaths from diphtheria in the State of Indiana.

DISCUSSION ON PAPERS READ BY DR. COX AND DR. MACCOY.

Dr. Jay—I desire to say one word in relation to quarantining diphtheria. Too many health officers think that it is only necessary to tack up a flag on the house. They think when they have done

that they have done their duty. We had in our town a serious epidemic of diphtheria, and we found that as we improved the efficiency of our sanitary police the epidemic decreased. Unless you will compel people to stay at home and compel other people to stay out, you will have diphtheria spreading. In the country, whenever a case breaks out, the Commissioners have authorized me to place a sanitary police officer there, and we have little trouble in the country.

Dr. Bence—Both of these papers are very nearly complete in themselves. The authors of both of them are evidently up-to-date health officers and physicians. It seems that Dr. MacCoy labored under a great many difficulties. It is difficult to suppress an epidemic of that kind. I did not hear him say anything about the use of antitoxine to immunize those already exposed; and when you fail to do that, you fail to get the chief benefit. In the limited use I have had of it it has never failed to immunize people. Of course, a person might talk about that pest of flies and the pustular diseases of the skin. Then, we have hog cholera all over the State. In a great many townships where they lost all of their hogs they did not have a case of diphtheria.

Dr. Hess—I like the persistency and determination on the part of the authors of these papers. Had we such health officers everywhere in the State, it is my opinion we would have very little epidemics of contagious diseases.

Dr. Cowing—I wish to add a word in commendation of Dr. MacCoy's efforts to suppress this epidemic. I can imagine no more thrilling spectacle than that of a determined health officer coping with such a formidable disease as he had to cope with at that place.

These papers are on two valuable subjects, and they merit a most earnest consideration and discussion. When we consider the mortality that arises from scarlet fever and diphtheria every year in the State of Indiana, it should arouse our utmost diligence as health officers to teach the people how to combat them and in every way to suppress these diseases.

You all know what we passed through in Delaware County in 1893. I was health officer at that time, and I will say that since the epidemic of smallpox in our county, in '93, we have had much

easier sailing than was experienced prior to that time. In regard to contagious diseases people are more submissive and doctors are more diligent. And surely without the earnest sympathies of every physician in your county the health officer can hardly hope to gain the desired end. Some health officers fail because they rouse the enmity of some of the physicians in their locality by some petty personal difficulties that arise. A health officer should be a diplomat, one who knows his physicians, one who knows their peculiarities. It is our place to study the physicians.

Now, speaking more specifically in regard to scarlet fever and its management, I think we cannot as health officers be too careful in our own demeanor in going from these cases. People watch the doctor and see how he behaves. We are to be examples to the other physicians and to the people of our county. They have their eyes on us, and I wonder if every health officer in the State of Indiana is as particular as he ought to be. We should accept this as a very serious responsibility. We might make an error by which we would destroy all the good we have been able to do. The doctors of our place have trained the people. They sit down and talk to them and explain to them the necessities of carefulness. There are some exceptions, but most of them are trying to create a good sentiment in favor of disinfection and the avoidance of these diseases.

Dr. Fairfield, Anderson—These papers are very important in their sanitary aspect. The paper on scarlet fever and its management, from a sanitary standpoint, I feel, ought to be fully indorsed by everyone here, because of the peculiar persistency of the scarlatina germ to continue and be with us. We cannot, it seems, stamp it out. I remember a case a few years ago, when I was health officer in Michigan, where there was no case of scarlet fever in the city, and a family, whose family physician I was, called me in to see one of their children, and it had a well-marked case of scarlet fever. About nine days before they had got a postal card from relatives of theirs in Chicago announcing scarlet fever in their family. That was the only clue I could find that that child had been exposed to the germ. About two years ago a case occurred in my own practice in Anderson. It was in the middle of a very severe winter, when we had a great deal of trouble with our gas. At that time the

Anderson people had the idea that all they had to do was to drive down and tap the reservoir for gas. They had not the arrangements to control it properly, so when a severe winter came we had a very insufficient gas supply. People were freezing all over the city. Well, in this house where the case occurred there were two children in the family. The house was an open one and the people belonged to a poor class. The people were forced to move out just as soon as the children were able to be moved. The house stood idle through the rest of that severe winter, and along in May another family moved in. They had not been there more than two weeks before two of their children were down with scarlet fever.

Now, this point comes up: How long should we quarantine scarlet-fever cases? We have all classes of disease—where there is little eruption, and in other cases where great slabs of skin will peel off. Now, the point is this: Do we not sometimes have this peeling of the skin that has no connection with the disease? I have thought we could. I have a case in mind where a mother took it from her child, had a severe case, and this kept up three months. After one layer of skin peeled off another would form, and so on until half a dozen layers of skin appeared and scaled off before one layer stayed. Now, when should we let up on a quarantine in such a case as that? The worst cases sometimes are the mild cases. It is not the malignant cases that are the most dangerous to the public; it is the doubtful cases—the cases that we don't know whether they are simply sore throat or diphtheria; and herein is where the physicians should be most careful. My position is that in all doubtful cases, especially if there is diphtheria in the neighborhood, is to have them under strict observation and under quarantine as strict as we can have. I find there is a difference of opinion as to what is necessary. Some say there is an unnecessary amount required of physicians and nurses to-day. Some physicians take the position that if they don't come in contact with the patient himself they do not need even to change their clothes. The neighborhood observes all these things and speaks of it, and often go to the health officer and complain about the physicians. They are afraid it will spread, and take every precaution from their standpoint. Scarlet fever is so tenacious that they all are agreed as to the essentials, but I find they are not agreed in regard to the technique of sanitary precautions in the treatment of diphtheria.

Dr. Griffiths—I wish to indorse these papers and what has been said in connection with them. I have had something to do with both these diseases in the past. My plan is when he have to visit a case to wear an outside coat, and when we leave the house, to keep away from everybody else until we can take precautions which will destroy every germ.

I have always followed the rule to hold the quarantine 30 days, unless there is some very manifest reason for not doing so. The State Board of Health of Pennsylvania says that the quarantine ought to be in force for six weeks. I think there is an intimate relation between scarlet fever, diphtheria and erysipelas, so far as the pestilential aspect is concerned, if I may express it so.

Dr. Fairfield—I wish to say that my experience has been that antitoxine works perfectly as an immunizing agent. The first place I used it was on a little boy who had a very marked case of diphtheria—a case I feared would prove fatal had I not used the antitoxine. He was taken sick on Saturday, and he lounged around and went to the grocery store, waiting for his father to come home, and all day Sunday he lay on a sofa in the family sitting room. On that day a neighbor with four children—one a boy of four and a little sister two and a half years old—ran about him and kissed and hugged him, and there he lay until 4 in the afternoon, when I was called and discovered the deposits on the tonsils, and immediately had him quarantined, and went back to the drug store and got the antitoxine. There had been so complete an exposure of the family that I used the antitoxine not only on the four children, but on the father and mother and on a brother of the father who was there visiting; in fact, I gave it to every last member of the family. Well, there was none of them taken sick except two of the children—a boy of 16 and a girl of 11 or 12. They had what to all appearances was a simple sore throat—the tonsils just a little swollen for a day or two. There were no deposits, and the temperature was not disturbed more than half a degree. These were the only two cases, and there was very complete exposure of that family.

Dr. Reagan, Knightstown—The city of Knightstown has not had diphtheria for several years, and we have not used antitoxine. We have had diphtheria round about in the country, but our system of

quarantine is so perfect that we escape it. Two years ago we had 35 cases of scarlet fever in a population of 2,000. On account of the failure of physicians to report some cases it spread. This last winter scarlet fever made its appearance in one family, a family I was attending. Everybody who was supposed to have been exposed in the neighborhood was quarantined. The quarantine was so complete that it did not spread.

Dr. Cook, Benton County—I think it is not so much a question of what kind of means we employ as disinfection. I think our great trouble is in the failure of the health officer to do his duty. Many health officers have the idea that the only thing they have to do is to receive reports from the physicians of their counties or towns, and then make a lazy report to the Health Officer of the State. And in the case of an epidemic they tack up a yellow flag, and their work is done. A great deal of this, I think, is encouraged by the boards that employ those health officers, the Common Councils of the towns. They take up almost anybody. If he is a good fellow or a good politician they will appoint him as the health officer, and I think it will be well for the Commissioners and the Common Councils of the towns to be instructed on that point, and for that reason I would like to introduce the following resolution:

Resolved, That the County Commissioners in each county in the State and each of the Common Councils of each of the incorporated towns and cities be instructed by a circular letter, especially prepared by the State Board of Health, instructing them and urging them to see that each of the health officers so appointed by them do their whole duty fearlessly, and upon failure, that they be dismissed, and one appointed who will do his whole duty as a health officer.

Motion seconded and carried.

Dr. Hibbard—I move that the resolution be referred to the State Board of Health, with power to act in their discretion as to the form of promulgating such substance as is contained in this resolution of Dr. Cook's.

Dr. Hibbard's motion was seconded and carried.

Dr. Reagan—I think the writer of the paper brought forth good ideas about the physician's dressing and the method of quarantining. If I ever have an epidemic in my county I shall certainly follow his directions.

Dr. MacCoy—There is a question in the minds of all of you why an epidemic could continue with such vigorous measures. I have never had it happen before when I have been health officer that one case followed another in the same house after disinfection. One thing that we could not control was the adjoining counties. In some of the adjoining counties funerals were public, and not only public, but coffins were opened at the grave. Since I commenced this paper a child died of membranous croup just outside of my territory. They wanted to bury it in the city, but I forbade it. The doctor reported that case. The officer told him to quarantine that house. I sent word to the undertaker that if he violated the ordinances I would prosecute him.

You brought up the question of using antitoxine to immunize. I administered antitoxine in 25 cases to immunize. Fourteen of these cases were in poor families, where they had to live in the room where the cases were in bed. One of them occupied the same bed. The children were all under 12 except one. Of the 25 not one of them took diphtheria, but one boy of 15 years of age contracted diphtheria 85 days later from another exposure, and one girl in a family where the disease was, who was not protected, contracted the disease at once. That was about my experience with antitoxine for immunity. I believe that a systematic use of antitoxine for immunity would have brought our death rate down to 1 per cent.

I mentioned one doctor who left the room without washing his hands. Well, he got a sermon after he went out of the house.

Dr. Laughlin—We passed through an epidemic of diphtheria last season. In the commencement of that epidemic there was no antitoxine used, and there was an effort on the part of some physicians to create a prejudice against it. But it was introduced, and we used it in a number of cases, and we never failed in a single case where we used it within three days of the appearance of the disease, to arrest the disease within 12 hours. We never used it in a single in-

stance as a preventive that the child did not escape. In one instance a child having the diphtheria was fondled by a younger sister, and it was impossible to keep her away, but she escaped the disease by the use of antitoxine. You cannot place too much reliance on the preventive effects of antitoxine.

Paper by Hon. F. J. Van Voris, father of health legislation in Indiana:

HEALTH AND ECONOMICS.

BY F. J. VAN VORHIS.

In the early part of the eighteenth century, Jonathan Swift, in a letter to Lord Bolingbroke, said: "I have no other notion of economy than that it is the parent of liberty and ease." This indicates quite another conception of the purpose and scope of economic science from that of a United States Senator, who, some months ago, in a magazine article (*Arena*, November, 1891, page 652) said: "Economic questions are in no sense matters of morals. * * * Such questions are purely questions of self-interest, or profit and loss, and can be decided on these grounds alone."

Political economy can never take its proper place among the sciences, nor assume its proper relation to the public interests; nor will statesmanship ever have its consummate flower, nor will it ever bear its perfect fruitage, until it is fully realized and admitted that economics, in all its departments, is more than the mere balancing of conflicting interests of unrestrained selfishness. In this science, according to the true conception of it, there is heart, soul, conscience, justice, beneficence, intellectual liberty and physical comfort. The whole outlook, the whole character of the science, depends upon the standpoint of observation. If we take our observations from the standpoint of property, property rights and property interests, the way of our vision is walled on either side by personal interests, and is roofed by individual selfishness. It is no matter of astonishment that one should turn away from the shadows and the gloom of such a sight, a sight that is unrelieved by a single ray of cheery light, and be ready to declare, with emphasis, that "economics is a dismal science."

If from a standpoint of humanity, human rights and human interests we make our observations, the view that opens around us has no limit except the limits of human endeavor, no bounds except the boundaries of human knowledge. Everything that interests humanity, that tends to develop men, women and children, is within the range of that vision. Nothing is outside of it. It is all inclusive. Everything that lifts them up, that will make them more comfortable and happier comes within the scope of such economy.

Such a view of economics not only places it securely among the sciences, but gives to the sciences, each and all, by reason of its being there, a higher meaning and a nobler purpose.

What are the sciences, earnestly groping amid multiform phenomena and with scalpel and crucible, microscope and diligent thought, searching for the causes in nature and seeking to determine nature's method? What are the arts that fill the ears with rippling sweetness and rhythms of majestic harmony, the eyes with glimpses of the divine in the flowing poetry of form and the luminous beauty of color? What is the law, filling the mind with solemn profundity of right, and out of the varied experiences of the world's social aggregations slowly, but surely, unfolding the rules by which man ought to be governed in his relation to his fellows? What are the industries? What is commerce? What is economics, considering as it does the necessities, the desires and the energies of man, and in the light of everything that the sciences and the law have disclosed, and by the aid of everything that the arts and the industries have produced, studying how most easily to supply the necessities, most completely to satisfy the desires, and most wisely to conserve the energies? What are the sciences, the arts, the law, industries, commerce and economics, but the offspring and the outgrowth of a noble selfishness, but the effort of man to know more of his surroundings and of himself that he may be the better able thereby to improve his condition. They are the guides which man himself has searched out. They are the aids which man himself has discovered. They keep him and lead him in the ways of everlasting progress and development. They are the lights which man himself had uncovered, and by which he guards against his own frailties and puts restraint upon his own imperfections.

Among all the sciences that cover the whole field of knowledge, and that seek to advance its boundaries, hygiology holds no second

place. Among all the workers that are in this great field of human endeavor, seeking the welfare of humanity, the hygieist occupies a position of no mean honor. There is no subject relating directly to the welfare of society to which the general public has given so little attention and seems to be so indifferent as to that of public health.

Life and physical vigor are essential requisites of individual success, and public health is at the very foundation of social prosperity. As a circumstance in economics, nothing could possibly be of more importance than the preservation of the health of the community. How much space has been given by standard writers on political economy to the very important question of public health? Mr. Henry George, in his effort to account for existing social conditions and to solve the questions relating to "Progress and Poverty," has not thought this a social question of sufficient importance to require him to even mention it. It does not appear to have occurred to him that the physical well-being of the members of society had anything to do with their productive power or with social progress, or that there was any causative relation between disease and poverty.

No discussion of present social conditions is likely to have any very satisfactory result that does not take into consideration the relation that the physical well-being of the members of society sustains to the condition of the whole social structure.

That peculiar conception of economic philosophy that makes its principles incompatible with the principles of moral philosophy, and excludes from it all questions of morals and makes economics a question of pure, unadulterated selfishness, is very likely to be associated with no higher conception of social organization than that it is something to be taken advantage of to accumulate individual wealth. Such a conception wholly loses sight of the truth that "Life is more than meat, and the body than raiment." It forgets the very purpose of living. If it be true that "Art is better than the article;" if it be true that "knowing how to produce is more valuable than the thing produced," it must be true that man is of infinitely more value to society, to the State and to the Nation than all the things he produces or possesses.

It is man himself that embodies the Nation's greatest wealth. It is the qualities of his mind and heart that are the flowers of the highest social and national development. Such a conception carries

us entirely away from material possessions and from that idea of wealth that makes it to consist of the abundance of things which a man hath. But that it is the true conception, there can be no manner of doubt; but however this may be, the thoughtless selfishness of human nature is such that it seems that society must be convinced that it is a matter of financial interest whether its members live or die; and living, that their physical condition is a matter of the gravest business concern. It almost makes one shudder to think of examining a human life with the icy coolness and shrewdness of business calculation; to think of measuring the value of life by the heartless standard of profit and loss, that we may determine in dollars and cents whether it will pay to save the one or preserve the other. When, however, it is remembered how much more difficult it has been to secure legislation and legislative appropriations to protect human life than it has been to secure legislation to protect property, we are forced to the unwelcome realization that circumstances compel us to resort to this method of investigation.

If we divest the question of all humanitarian ideas and consider it without one reference to the benevolent and humanitarian spirit of the time and without one single appeal to the sympathies of the human heart; if we strip the whole subject of everything that appeals to the higher and better motives, leaving nothing but the sordid skeleton of financial interest, it is still of sufficient interest and importance to demand the most earnest attention of society and the state.

In 1881 the General Assembly of this State passed a law creating the State Board of Health. It has now been in existence about sixteen years. When created, it was grudgingly allowed the sum of \$4,000 per annum to do its work; and the Legislature, with its eyes on the dollar and with property interests more in mind than the value of human life, struck out of the bill by which it was created much of the machinery intended to facilitate the Board in its work, because that machinery would cost a few hundred dollars per annum.

It is hardly necessary to say anything to impress upon this body of intelligent workers the importance of this work; but I would like to join you, if I can, in saying something that would impress the people of this State and particularly of its capital city.

Marion County had, in 1890, a population of 141,156. During 1894 there were 1,834 deaths in the city of Indianapolis and in the county of Marion 2,190. This was a death rate of about 16 per thousand. An examination of the reports will show that it is a very low estimate to say that three out of every sixteen resulted from preventable diseases. This, too, without counting consumptives as victims of preventable disease. It would be very easy for the Board of Health, if supplied with sufficient means and the power to make proper regulations, to reduce the death rate in the county to thirteen per thousand. What would this reduction in the death rate mean, financially? In the year 1894 it is a low estimate to say that the unnecessary loss of life in the city of Indianapolis amounted to about 425. It is estimated by the United States government that the value of a soldier is \$1,000. The estimated value of a human life to the country, made by the Register General's office in England, is \$720. If we take the English estimate, the money value, upon a purely business basis, with no higher estimate of a human life than that of hogs or cattle, lost in Marion County in 1894 was \$305,500. According to the English estimate, certainly a very conservative one, there are enough sick from the same class of preventable diseases to make 720 days of sickness for each death, counting those that die and those who are sick that do not die.

If this calculation be confined to preventable deaths in Marion County in 1894, and the estimated average number of days' sickness to each death, will make the whole number of days' sickness 305,500. The Massachusetts estimate of the loss by each day's sickness is \$2.00. This is also a very conservative estimate, and makes the whole loss to Marion County for 1894, by sickness, \$611,000. Add to this the money value of the lives lost, and the whole loss is \$916,500. This calculation takes no account of many losses that may be traced more or less directly to the same cause. Most of these deaths and of this great loss occurred within the corporate limits of the city of Indianapolis. Such facts are, no doubt, familiar to most of you; and I only refer to them here for the purpose of making a contrast.

In this city we maintain a fire department for the protection of property at an expense of about \$100,000 per annum. We maintain a police department for the same purpose at about the same

cost. We expend on our streets \$250,000 more, and run ourselves in debt for another half million to buy waste land for public parks, and with all this lavish expenditure to protect property and increase the value of it, our City Health Board is allowed \$5,000 per annum to protect men, women and children. Three or four sanitary policemen are expected to police a city twenty miles in circumference. On this small sum, and with this small force, the Board of Health is expected to take care of the sanitary condition and keep a record of the vital statistics of a city of more than 100,000 inhabitants. It is absurd; it can not be done. Outside of the insignificant salary allowed the Secretary of the State Board and the stenographer for the Board, the last Legislature allowed \$3,400 for the work to be done by this Board. Every man who voted for such an allowance ought to hang his head in shame. It is preposterous; it is wicked, to thus curtail the work that is of so great importance. It is utterly impossible to do more than to make a mere beginning at what ought to be done by this Board. If the appropriation had been \$50,000 it would not have been out of proportion to other appropriations made, when the importance of the work is considered.

I am not able to give you a calculation for the State similar to that which I have given for Marion County, to show you the loss that the State has suffered; and if I was, time would hardly permit it to be done. This much is certain, that there has been proportionally the same amount of loss to the whole State, and it will not amount to less than \$15,000,000 per year. If there was any real and worthy purpose in the creation of the State Board of Health, it was to save life and to save our people from the thralldom of preventable diseases, and to give them, to the limit of science, the ease and comfort that comes from good health. But if we come down from this higher purpose, it may be said that the purpose was to prevent this enormous waste of productive power and accumulate capital.

Questions are being crowded upon the attention of our health officers to-day, the magnitude of which can not be exaggerated, and upon the solution of which depends consequences far-reaching and of the gravest character.

The character of our food supply and its adulterations, the proper care and treatment of animals to be used for food, the preservation

of our water supply and the furnishing of pure water, the disposal of refuse matter about our centers of population, are all questions of the gravest importance that at once indicate the close relationship between hygiology and economics, even should it be admitted that economics is no more than a science of pure selfishness.

With all this mass of work pressing upon the Board, the public indifference is little less than appalling. The Boards of Health of Indiana, State and local, are expected to do all this work, grapple with all the problems mentioned, and many others of equal importance and equal gravity, with appropriations so small that the work of the bravest, most industrious, most competent official is almost destroyed even before it begins.

We have reason now to congratulate ourselves and the State upon the present construction of the State Board, and that we have a Health Officer as competent and whose heart is in the work; but this Board needs the co-operation of the general public, and this will only come when the people and their representatives in the halls of legislation are fully awake to the importance of hygiology. This opens another field of work for the Board, that I will suggest, for I am merely suggesting and not attempting to discuss anything.

When properly understood and a sufficient appropriation is made, the Board of Health will be a part of our system of education. I have taken occasion more than once to complain that the Board has made no effort to educate the public. Several years ago the friends of sanitary science and those interested in the work of the Board held a few meetings in different parts of the State; but these meetings were soon discontinued for the reason in part, no doubt, of the small appropriations. What the people need is not papers from foreign sources, discussing scientific subjects they do not understand, but practical teaching of the simplest elementary principles to those who do not know them.

If one-half of the knowledge, as it now stands, could be made to serve the needs of society, how wonderful would be the improvement. Of what use is all the vast accumulation of scientific and statistical knowledge, unless it can be so applied that it will improve the condition of men, women and children. Investigation and increase of knowledge is all right; but it is not this we want half so much as the teaching of the simple elementary principles

of hygiology to those who do not know them, who have never had an opportunity to know them, who, by reason of their want of knowledge, are too often the unconscious executioners of their own children or the destroyers of their own lives.

There are those who, no doubt, when you have presented for their consideration, for the first time, these estimates of losses entailed by preventable diseases, will hear it with incredulity. If so, then they will be still more incredulous when you assert that these losses, great as they are, are only a tithe in comparison with the losses resulting from causes over which the Board can exercise no control except by educational methods.

Hygiology is at once a science of preservation and prevention. A preservation of life and a prevention of that which destroys life. This preservation and this prevention can not be brought about by law alone. A part of the field covered by the restraints of legal enactments is small. The remainder of the field must be worked by educational methods.

The thought that was in my mind when the bill for the organization of the State Board of Health was drafted was that its work would be principally educational. I have felt much disappointed that so little effort has been made in this direction. I venture now to express the hope that some effort will now be made by the Health Department along this line, even if the appropriation is small; and that when the next Legislature assembles an effort will be made to impress upon them the importance of a sufficient appropriation to enable this Board to engage in this much-needed educational work.

When to interests that can be imperfectly measured by financial methods and to the educational work so much needed, we add physical suffering and sorrow, blighting of hopes and the breaking of hearts to be prevented, and remember that happiness can not be bought with fine silver, nor sorrow and suffering paid for with pure gold, we can make some estimate of the work that is before our Board of Health. We may then possibly realize how intimate is the relationship between hygiology and economics; that, indeed, Hygiology and Economics are sister sciences, walking arm in arm over the field of knowledge, and seeking to use treasures found there for the preservation and development of humanity.

If our people and our representatives could only be made to fully

realize that property is not the measure of a nation's wealth, but that the true measure is the intellectual power and moral character of its people; if they would only consider that the accumulation of property is but the means to an end, and that end human development; then would they recognize the true place of the science and the importance of the work to be done, and the work of our Health Boards would be no longer embarrassed by appropriations that are barely sufficient to pay meagre salaries of the Health Officers and their clerks.

Dr. Hurty—We certainly are deeply indebted to Dr. Van Vorhis for his admirable presentation of this subject. Its power and far-reaching influence we all must acknowledge. I propose, before we discuss this paper, to suggest that we hear Dr. Bitting, as he has to go early this afternoon. Then we will discuss them both.

Paper by Dr. Bitting, State Veterinarian:

UPON THE RELATION OF BOVINE TUBERCULOSIS TO HUMAN CONSUMPTION IN INDIANA.

BY A. W. BITTING, D. V. M., Purdue University.

Mr. President and Members of the State Health Officers' Association:

I offer no apology for introducing this subject for discussion, as tuberculosis is, without question, the most destructive disease in our State. According to the last report upon vital statistics to which I had access (1894), I find that 2,173 people died of tuberculosis. This is 13.9 per cent. of the total deaths in the State, twice as many as died of pneumonia, two and a half times as many as died from diphtheria and twenty-one times as many as died of scarlet fever. You have said that owing to the defective method of collecting death statistics the figures are not exact. If the figures at other places in the State are like those obtained at Lafayette, the showing is not in favor of tuberculosis. For a certain period the Health Officer's books show eleven deaths from tuberculosis, while the newspapers for the same period name forty-three. Without question, the per cent. of deaths from this disease in this State is very high,

and if there is any relationship between bovine tuberculosis and human consumption, the former acting as an infecting or causative agent, the fact should be known.

The State has taken a well-defined position upon the control of most contagious and infectious diseases. Health Officers are employed to search for the cause of typhoid fever, to examine water supplies and condemn wells when necessary, to quarantine against smallpox, diphtheria, scarlet fever and like diseases; no matter how much personal inconvenience the individual may suffer, it is for the public good and he must submit. The right to require disinfection of premises, abate nuisances and even destroy property, when necessary for the protection of human life, is given into their hands. Such authority is questioned at once when dealing with the disease causing the greatest mortality of the human family.

Tuberculosis is a contagious and infectious disease. Bovine and human tuberculosis are identical, as has been demonstrated upon many occasions.

Within recent years a vast amount of work has been done to determine the source of infection and the conditions which favor the development of the disease. You are familiar with this work and I wish to call attention to one line, that of infection through the food eaten. It has been demonstrated that infection may occur by feeding food containing the sputa of tuberculosis patients. Jacobs, Devillers, Lengler, Durieux, Demme, Bollinger, Lamallerec, Nocard, Johns, Peters, Morro Zochokke and Eberlein are quoted by Reissman as having observed such infection in heifers, dogs and cats. Cases of infection by using milk from tubercular cows are quoted by the same author as having been witnessed by Klebs, Goring, Zippelins, Lehnert, Kloss, Böttcher, Woodhead, Utz, Demme, Uffelman, Felzet, Martin, Ebstein, Hergard, Johne, Prummers, Gosse, Sonntag, McFaydean, Bang and Lucas, in calves, pigs and dogs. Woodhead, Martin, Bang, Lucas and Schmidt have produced the disease by feeding the diseased meat from affected animals. A very large number of observations by inspectors at abattoirs show that in young calves the disease is usually located along the intestinal tract, indicating that infection has occurred through that channel.

These observations and experiments show conclusively that the disease may be transmitted to lower animals through the food.

Many of the experiments were conducted with such care that doubt cannot be entertained as to the method of infection. As the human body does not differ radically from other animal organisms, we are forced to draw the conclusion that infection may occur in the same manner.

The Royal Commission on Tuberculosis, after five years' study and experimentation, demonstrated in the most positive manner the infection of calves, pigs, guinea pigs and rabbits by using sputa, milk and meat of tuberculosis patients. They insist that no tuberculosis cow should be used in a dairy.

Dr. Harold C. Ernst, of Harvard University, after a most painstaking study on 36 cows shown to be tuberculous by the tuberculin test, found the tubercle bacilli in milk on 19 different occasions and from 12 different cows. The microscopical examinations were supplemented by inoculation experiments and feeding tests on guinea pigs, rabbits, pigs and calves. A portion of the animals became affected. A post-mortem examination of the cows affected confirmed the diagnosis made by the tuberculin test, but in no case was the udder affected. The four points of his summary are as follows:

1st. While the transmission of tuberculosis by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully.

2d. The possibility of milk from tuberculous udders containing the infectious elements is undeniable.

3d. With the evidence here presented, it is equally undeniable that milk from diseased cows with no appreciable lesion of the udder may, and not infrequently does, contain the bacillus of the disease.

4th. Therefore, all such milk should be condemned as food.

The extent to which the disease prevails among cattle is very much larger than generally supposed. In the countries where careful records have been kept at slaughter houses and where the tuberculin test has been made the percentage has been startling in some instances. We have reason to believe that the cattle in this State are not as badly affected as in older States, as the use of close, crowded stables has not been in vogue. The disease was reported to me last year by veterinarians or observed by myself at Asherville, Brunswick, Dana, Evansville, Franklin, Fort Wayne, Greencastle, Kokomo, Lafayette, Lebanon, Muncie, New Albany, Noblesville,

Rensselaer, Richmond, Rushville, Terre Haute, Vincennes and Warsaw. This year I have received reports from Elkhart, Lottaville and Wabash. I have made about 400 tuberculosis tests to date, and have killed nine cows afflicted with the disease. These were animals not suspected of having the disease. In visiting dairies I have seen cattle which from physical examination alone gave the most positive evidence of disease, and yet were supplying milk for human consumption. I have been made cognizant of repeated deaths in herds of cattle, the offspring of which are constantly being shipped to different points as breeding stock. The history is that of tuberculosis. Recently a member of the station staff visited a dairy farm, and upon going into the barn, smelled an unusual stench. Upon investigation it was found that a cow had died and had been dragged under the shed for the hogs to eat. The owner did not know the trouble, but a little examination showed the tubercular nodules and that the cow had died of the disease. Aside from the work which I have done by making tuberculin tests, supplying the tuberculin to veterinarians to make the test and receiving reports of cases, I can only make one other reference to work being done on the disease in the State. In the address by the President of the State Board of Agriculture he says the Live Stock Sanitary Commission killed 14 tuberculous cows and quarantined 551 cases. The report of the Commission makes no mention of this work, and inquiry has never enabled me to locate these animals.

This, gentlemen, is sufficient to show that the disease is common among cattle in the State; that authorities agree that the milk and meat may be the means of infection, and that it should be the duty to look into the wholesomeness of the milk supply, and especially that it be supplied from herds free from this disease. The disease is one that cannot be detected readily except by the tuberculin test. Only advanced cases can be diagnosed by the eye, ear and touch. The tuberculin test is easily made. The temperature is taken every two hours during the day, beginning at 6 o'clock in the morning and continuing until 10 o'clock at night. At this hour a given amount of tuberculin (depending upon the brand) is injected under the skin over the region of the shoulder. The temperature is again taken on the succeeding day on the corresponding hours. If the

animal is not affected with the disease, no reaction will occur. If the animal is affected, there will be a gradual rise and fall of temperature.

A bulletin upon "Bovine Tuberculosis in Indiana" was published by the Experiment Station early in the year, giving in detail the work done in the State, the symptoms of the disease and the diagnosis by the tuberculin test.

The test is one of great accuracy in diagnosis, but few mistakes occurring in experienced hands.

DISCUSSION OF DR. BITTING'S PAPER.

Question—How is it communicated in a herd of cattle?

Dr. Bitting—By the exhalations on the feed, troughs and stalls. It is by the germs on these things.

Q.—Has any animal known to be affected with tuberculosis ever gotten well?

Dr. Bitting—In some cases where they have used tuberculin for a long time. It is a question whether they are completely cured. They cease to react and they are pronounced cured. They do not get well naturally.

Q.—Has it been absolutely demonstrated that the tubercular germs can pass the digestive apparatus of either an animal or human being?

Dr. Bitting—It has been demonstrated that the juices of the intestinal canal will not digest them, and that by feeding material containing the germs disease may be induced.

Dr. Hibbard—I think it is a very important thing to know whether the germ of tuberculosis contained in milk will absolutely pass the digestive apparatus of the animal or person that consumes it. I think the importance of that question cannot be overestimated. For five years I have been inquiring of noted men, whom I supposed would be qualified to answer the question without any trouble, whether it had been shown that the germ will pass the digestive organs. I have not got a direct answer from any of them.

A very noted sanitarian promised me at Buffalo last summer that he would give me that demonstration. He asserted that it had been made. He did not hand it to me, and before we separated I asked him, and he said he thought he would do better when he got back to Washington; that he would examine the authority he was relying upon and send me the authority. I waited until about two months ago, and then wrote a letter to him to refer me to the authority he spoke of. He has not had time to answer. It involves some questions of very serious importance, as has been intimated in the query I have proposed. I think we will not be able to manage this subject and a number of other contagious diseases unless we get absolute knowledge of the germ—how they maintain their lives and what kills them. Until we reach this point we will always lack complete success.

Dr. Henderson, Covington—I listened with a great deal of interest to Dr. VanVorhis' paper. I think it is almost perfect in its composition, and I think it would do a great deal of good if each county and city health officer would take that paper and have it printed and give it to their respective city and county authorities. I think this paper, if properly distributed, would do more good than all the other papers put together, because it is the foundation on which all the others have to work. We first must have finances. The Commissioners employ the cheapest men; they don't see that the laws are enforced until we have an epidemic, and then they do better for awhile. I would like to see the ounce of prevention that is worth a pound of cure put in practice.

Dr. Hurty—Dr. VanVorhis' paper interests me more than I can express in language. Most of you are aware of our effort before the last Legislature to get proper health legislation. A bill was prepared which was an ideal bill. We could not hope for its passage, but it was presented to the last Legislature in hopes that it would be used as a quarry from which to draw the material to frame a bill. The chairman of the Health Committee worked manfully for that bill. He, together with Dr. Patterson, of Brookville, for two successive nights, worked until 2 o'clock drawing from that bill those points which they thought would be acceptable, and they constructed a bill of very great value. It

was introduced into the House and got up to the third reading, but never was read the third time. The committee in the Senate sat down on it promptly. They thought that the bill was not practicable, although all its features are in force in Massachusetts and other States. From the beginning it was apparent that the bill would not be reported from the Senate. The Senate committee reported a bill of its own, which, in my opinion, was retrogressive. It went back from where we are now. That bill progressed to the third reading in the Senate. Well, the outcome of the agitation was that the matter has been presented to the hold-over members of the Senate; there are no hold-over members of the House, but there will undoubtedly be some of them back, and they expressed themselves over and over again as having received light on this subject. Four hold-over Senators came to the State Board of Health Office and said they wanted all the information they could have that was possible upon this subject between now and the next session, two years hence. I take that as very encouraging. I have seen two of those Senators since, and they repeated that request; so I think things look very bright for the future. But there were some incidents in connection with the efforts that we made that will interest you exceedingly. One Senator said: "What is the profit of all this?" I told him it would save money and save life. He said: "Don't you know that lots of lives are worthless?" It is hard to get along with men who look at the subject in this way.

A member of the Ways and Means Committee, when approached with a full argument upon the subject how a properly equipped health department in the State would be beneficial, the amount of money it would save, the lives it would save, the sickness that it would prevent; that it would decrease the number of insane, decrease the number of criminals and save on every hand, listened attentively, and then said: "Now, don't you know I believe that is all poppy-cock? There is nothing in that at all." That indicates again that this campaign of education must be kept up. I told him that the benefits of caring for the public health had been amply demonstrated both in Europe and in some of the States of this country, and those States all have money to lend, while States like Indiana, that do not attend to the public health, are borrowing money. But nothing seemed to reach that gentleman. At last he

said: "I will tell you what can be done. We will get a resolution through to abolish the whole health business." I told him if that could be done it would cost the State fifty or sixty million of dollars. I found out afterwards that this man had had a personal difficulty with a health officer. That was the secret of the whole thing. He had maintained a nuisance; he had been summoned and had lost his case, and he was afterward sent to the Legislature. That is a further indication of what must be overcome. I learned a great deal of human nature that I did not know before.

I am certain that so soon as the people are educated in the truths spoken by Dr. Van Vorhis and made to see them plainly, there will be no trouble about proper legislation. There is where the education must commence. It will be interesting to know that we have taken steps to commence that education with the farmers. I know that a legislator will run from his seat, rush out into the lobby and meet a man who signs his name "Farmer" twice to one time he will rush out to meet the man who signs his name "Doctor" or "Lawyer" or any other profession. Farmers' institutes are held in every county; the Governor sanctions this movement, and he wants the health officers to participate in these institutes. Very soon the State Board will issue instructions to that effect, asking the county and town and city health officers that whenever a farmers' institute is held in their neighborhood to attend and ask for the privilege of presenting to them the importance of maintaining and preserving the public health. They all believe in the old adage of the "one ounce of prevention worth a pound of cure." I have arranged with Professor Latta, of the Government Experimental Station at Purdue, to attend at least 10 of these farmers' institutes. I think if we do this that two years from now the Legislature will be ready to listen to us.

Dr. Hess—You can get through the Legislature bills to stop hog cholera and diseases of cattle. Again, see the sums of money that are expended for that purpose; but there is not a health officer in the State of Indiana that is half paid for his services. This paper should stimulate us to more energetic movement, so that in two years from now we can get better measures passed through the Legislature.

Dr. Van Vorhis—I will tell you how the first bill to organize the State Board of Health was passed. It was found that the bill could not be passed on its merits. It was brought up once and failed. A motion to reconsider was made, and that was passed. Now, I will tell you some of the steps by which I secured the passage of that bill. I took a list of the Senators and hunted up every man's name and ascertained in what legislation he was interested. I studied every man in the body, found out what particular thing he was interested in and what particular legislation he desired, and in that way secured his assistance for the Board of Health bill. In that way the bill was passed through the Senate. After it went to the House I took the register of the House in exactly the same way. Many men were not opposed to the bill, but they were indifferent to it, and if we secured their assistance it was by some assistance of some kind that they desired for themselves. And so the bill was not passed on its merits, but by what is known as the system of "lobbying." And so it has been with nearly all the medical and health legislation. It ought not to be so. When we can get to such a point that people will consider it on its merits we will not have to use these methods.

Adjourned.

THE DIAGNOSIS OF TYPHOID FEVER BY THE BLOOD-SERUM METHOD.

BY SEVERANCE BURRAGE, S. B.,
Department of Sanitary Science, Purdue University.

Modern bacteriological research has had the tendency to make some phases of the practice of medicine more exact. In the future the physician is going to have more positive means of diagnosis than the varying and uncertain symptoms that he now possesses, and it is the physician himself who will most appreciate the value of more prompt and accurate methods of diagnosis, because he, more than any one else, realizes the importance of knowing at an early stage of the disease just what the nature of the trouble is.

Within the last few years the bacteriologist has come to the assistance of the medical men in the determination of consumption,

both by the tuberculin test and the well-known process of staining the bacteria in the sputum of suspected patients. Again, the bacteriologist has devised the culture method of diagnosing diphtheria, which has proved so important in connection with the use of antitoxine; and within the last year a very practical and apparently accurate method of diagnosing typhoid fever has been brought to light, and the results so far reported are most favorable to it.

As an epidemic disease, typhoid fever is of especial interest, not only to the physician, but more particularly to the health officer. The number of cases of typhoid in a community is usually a good measure of the sanitary condition of that community.

An early and accurate means of knowing the prevalence of typhoid is most essential to the health officer, because he must find the source of contamination which gives rise to the typhoid cases. He would look either to the water supply or the milk supply as the probable sources. But it is my purpose in this paper to take up this new method of diagnosing typhoid fever, not from any personal experience in the matter, because that has been so small, but to give you what I have gathered together from the experience of others, and will this evening show you experimentally the method itself.

This serum method depends wholly upon the so-called Pfeiffer reaction. Pfeiffer showed that the serum of typhoid convalescents or of immunized animals, when injected into the peritoneal cavity of guinea pigs, at the same time with the virulent culture of the typhoid bacillus, had the property of destroying the motility of the bacilli, as well as agglutinating and rapidly disintegrating them in the serous fluid. This same serum, when similarly injected with cultures of *B. coli communis*, had no effect whatever on the motility or arrangement of the bacilli.

Another typical reaction demonstrated by Pfeiffer and Kolle was this: That if the serum of immunized animals was added to bouillon in certain proportions and this mixture inoculated with typhoid bacilli, there would result, after 24 hours, a clear fluid, with the bacilli precipitated at the bottom of the tube, collected in clumps. The same bouillon inoculated with *B. coli communis* caused a turbidity, and the germs would remain actively motile. It now remained for Widal to make this applicable in testing the blood serum of persons suffering with typhoid fever early in the disease, say the

fifth day, or having previously had typhoid fever. He discovered that certain specific substances were present regularly in the blood of typhoid fever, as early as the seventh day, and sometimes earlier. He found that if he added a moderate number of typhoid bacilli to a drop of blood serum or to a drop of water containing a solution of dried blood from a typhoid patient, a very peculiar reaction occurred, which reaction was readily studied under the microscope. The bacilli themselves gathered together in clumps and then ceased their former active movements. Oftentimes this reaction took place within five minutes, and always within a few hours. With no other blood than that from those who have suffered from or are suffering from typhoid fever will the typhoid bacilli give this reaction. Dr. Wyatt Johnston, of Montreal, at the fall meeting of the American Public Health Association, 1896, showed how the technique of this process could be so simplified that anyone could collect the blood for examination, and if he be familiar with ordinary bacteriological work, could readily perceive the reaction. To obtain the blood, according to his directions, a needle prick of the ear or finger of the suspected case is sufficient to give the required amount upon a clear glass slide. For this glass slide can be substituted a small piece of mica or even a strip of clean paper. Upon this the blood is allowed to dry, and it is thus sent or carried to the laboratory. Reaction can be obtained even after the dried blood has been kept several days. While many object to this dried-blood method as not being accurate enough, since the exact amount of blood taken cannot be determined, it certainly has proved to be a very practical method. Dr. A. E. Wright and Surgeon-Captain F. Smith, in a recent number of the *Lancet*, have an interesting paper upon the application of the serum test to the differential diagnosis of typhoid and Malta fever. They use altogether the liquid serum in specially devised tubes, and apparently get very accurate results. They consider the test a most valuable one to diagnose typhoid from among the many continued fevers that are so common in tropical countries. To continue with the dried-blood sample, after it has reached the laboratory a loop drop of a bouillon culture of absolutely reliable typhoid bacilli is placed upon a clean cover glass, and to this is added a large loopful of a watery solution of the dried-blood specimen. The cover glass is now inverted over a hol-

low side, sealed at the edges with melted vaseline. Now the rapid clumping of the bacilli in the hanging drop can be observed under the microscope with a high-powered dry lens or with a one-twelfth oil immersion. Such is the test itself, but there are many opinions in regard to the amount of dilution of the blood serum, the length of time before reaction be observed, both of which factors are important in making the correct diagnosis; but from all the statistics that can be obtained it is evident that this serum test is going to be a most valuable aid both to the physician and the health officer.

In New York and Chicago health department laboratories examinations of suspected typhoid patients have been going on for several months, and apparently with great satisfaction to all concerned. Out of 34 cases examined in the New York laboratory, all of which were evidently typhoid, 33 of these gave the characteristic clumping of the bacilli, either immediately or within a few hours. In 14 cases of other diseases this clumping did not occur at all, or to such a slight degree as to be easily distinguishable from the typhoid cases. If these statistics mean anything, it would seem possible for one to make a correct positive diagnosis in the great majority of cases, from the reaction which takes place between the typhoid bacilli and the blood of the suspected case. Should there be no specific reaction in a suspected case, sick over a week, the diagnosis of typhoid fever could be excluded. If there was a marked reaction, then, unless the patient had had an attack of typhoid fever within the last ten years, the case would be typhoid fever. Drs. Gehrmann and Wynkoop, of the Chicago Board of Health, have been carrying on systematic examinations of suspected typhoid cases by this method since November 20, 1896. Up to January 31 of the present year 158 cases have been subjected to the test. In 99 cases the typhoid reaction was observed and in 59 cases it was absent. In 57 cases, subsequently proved to be typhoid from the clinical course, the reaction failed in five, necessitating giving a negative report. They attributed this failure of the test to the hurried examination that is often required and the failure upon the part of the physician to send enough of the blood. They had hoped to utilize this new test to show the presence of the typhoid bacilli in the water supply. The reverse of this typhoid serum diagnosis in the differentiation of cultures from water is now used in such cases as show

growth for the typhoid colli group of organisms by Parietti's method. So far culture has been isolated from the water supply of George B. Shaddack, of Boston, reported upon a number of cases although they had recently found *B. coli communis* in a number of instances, and they conclude that this method can be of value only in the differentiation of cultures of water bacteria after the usual methods of separation or suspicious organisms.

At the meeting of the Association of American Physicians held at Washington last week, the serum test of typhoid fever received considerable attention and gave rise to interesting discussions. Dr. George B. Shaddack, of Boston, reported upon a number of cases occurring in the Boston City Hospital, which were tested with Widal's serum. All of his tests were made with the liquid blood, and one hour was always allowed for the reaction to occur. He also obtained very satisfactory results by using a room-temperature culture of the typhoid bacilli instead of a thermostat culture. He found that there was always a sediment of dead organism present in the thermostat cultures, which, if shaken up into the fluid, might interfere with the diagnosis. An analysis of 116 cases, with a clinical diagnosis of typhoid fever, showed the reaction as follows:

On the sixth day in.....	1 case.
On the seventh day in.....	4 cases.
On the eighth day in.....	6 cases.
On the ninth day in.....	5 cases.
Between the tenth and fifteenth day.....	23 cases.
Between the fifteenth and twentieth day.....	16 cases.
Between the twentieth and thirtieth day.....	32 cases.
Between the thirtieth and fortieth day.....	13 cases.
Between the fortieth and fiftieth day.....	11 cases.
Between the fiftieth and sixtieth day.....	5 cases.

In 18 cases with clinical diagnosis other than typhoid fever there was no reaction in 15, of which one was phthisis, two pneumonia, two pleurisy, four meningitis, three "febricula," one acute miliary tuberculosis, one appendicitis and one influenza. There was a reaction in three cases—one of pneumonia, one of acute miliary tuberculosis and one exophthalmic goiter. In all three of these cases the typhoid reaction was justified and the test made the diagnosis.

Among those who entered into discussion upon this subject were Dr. Abbott, of Philadelphia; Dr. Musser, of Philadelphia; Dr. Osler, of Baltimore; Drs. Atkinson and Tyson, of Philadelphia; Dr.

Billings, of Chicago, and Dr. Whittaker, of Cincinnati. All indicated the test was quite satisfactory in the majority of cases.

Dr. J. J. Mackenzie, in the *Canadian Practitioner*, gives a result of his experience in this serum reaction of Pfeiffer as follows: Out of 82 cases examined, 61 of which were typhoid, or subsequently developed into typhoid, 57 gave positive reaction. Twenty-one cases, which were not typhoid, or subsequently proved not to be typhoid, gave a negative reaction. Amongst the non-typhoid cases were cases of tuberculosis, acute dilatation of the heart, articular rheumatism, septicaemia, and healthy individuals.

Among the unfavorable comments upon this method, I find that R. Stern mentions a case of otitis, which with the serum dilution of one to twenty, gave a typical typhoid reaction in less than an hour. The patient had never had typhoid. Also, R. Breuer, who was enthusiastic in his recommendations, reports poor results with the microscopic method of procedure. Most unfavorable of all is the report of A. S. Gruenbaum, of Vienna. He used the microscopic method without regard to the ratio of dilution of the serum. Eight typhoid patients and five who had had typhoid from five to thirty-seven years previously, gave reaction; but so did also fifteen out of twenty-four patients suffering from miscellaneous diseases other than typhoid. It is interesting to know that all of the jaundice cases tested gave a very strong reaction with the typhoid bacilli.

Dr. J. B. Thomas, Jr., of Brooklyn, collects a number of reports, which include cases tested both by the gross method and others microscopically, some with dried blood and some with serum. One hundred and thirty-two cases of typhoid were tested, of which one gave a doubtful reaction, and four examined on the 6th, 7th and 9th days no reaction. One hundred and twenty-nine non-typhoids were tested, of which twenty-six gave a reaction, seven having had typhoid from three to thirty-seven years previously, five a doubtful reaction, and ninety-eight no reaction. Dr. Thomas concludes that the method of testing dried blood in low and indefinite dilutions, as recommended by Johnston, contains too many sources of error to warrant its use as a method of diagnosis.

Dr. John Winters Brannan, of New York, in a paper read before the Society of Alumni of Bellevue Hospital, in January of the present year, sums up his experience with the following conclusions:

1. In the large majority of cases of typhoid fever the blood serum will give the so-called typhoid reaction at some time during the active period of the disease. In a small proportion of cases, perhaps ten per cent., the reaction will not be obtained, if at all, until the diagnosis has already been made from the clinical evidence.

2. In cases apparently non-typhoid in nature, a positive reaction may occasionally occur, but probably not oftener than in one or two per cent. of the cases. This pseudo-reaction is to be attributed to the protective bodies which are present to a greater or less extent in normal blood serum.

3. In a varying proportion of cases, both typhoid and non-typhoid, a partial or doubtful reaction takes place. Repeated tests are then required in order to determine whether the reaction is due to the normal protective bodies or to the specific properties of typhoid blood.

4. The serum test of Widal is a most valuable aid in the diagnosis of typhoid fever. With greater experience and improved technique its value will in all probability be even greater and more clearly defined. For the present, however, the test should not be relied upon alone, but should be taken together with the clinical signs of the disease.

So much for the testimony and opinions of various authorities as to their experience with this sero-diagnosis of typhoid fever.

But before closing this paper, it will be interesting and instructive to see what some of the theories are in regard to this peculiar specific reaction; what substances cause the agglutination. For this purpose, in order to give it to you well digested, I will quote directly from Dr. Brannan's paper, published in the New York Medical Journal (March 27, 1897, p. 414):

"The nature of the agglutinating substances in the serum is an interesting subject of speculation and study. It appears that various fluids and secretions of the body possess the agglutinating power to a greater or less degree. It is very marked in the fluid of blisters. It has been found in the tears, also in the fluid of the pericardium, peritoneum, and pleura. It is sometimes present in the urine, but not constantly. The action was very marked in the milk of a nursing woman suffering from typhoid, but was not found in the blood of the infant nursed by the woman. The aqueous humor of im-

munized rabbits gave the reaction in five cases out of nine. Experiments by Widal seem to show that the power is exerted by the fibrinogen and globulin of the blood, but is wanting in the albumen. On analyzing the milk of immunized goats, the power was found in the lacto-globulin, also in the casein, but was absent in the lactalbumen. Removal of the albuminoid substances, fibrinogen, globulin and casein from the body fluids of a case of typhoid fever, removes the agglutinating power from these fluids. According to Pfeiffer, the agglutinating substances are not antitoxines, but are bactericidal bodies of the nature of ferments, in active and inactive form in the serum. Nothing is known as to the origin of the bactericidal substances, but Pfeiffer maintains that the leucocytes have no part in the process. Other observers have shown that if the immunizing serum be heated to a certain temperature it loses its bactericidal action without losing its power of agglutinating the typhoid bacilli. It is evident therefore that this special reaction is not dependent on the bactericidal property of the serum, but is due apparently to the presence of so-called protective bodies, and it is generally accepted that these protective bodies, the alexines of Buchner, are present to a greater or less extent in normal blood serum. Gruber not only believes that protective bodies are found in normal serum, but maintains that these bodies are the direct agents in killing the bacteria which enter the body. In his opinion, the specific substances which result from immunization simply aid the bactericidal action by destroying the outer covering of the bacteria, thus laying them open to the attack of the alexines of the normal body. Pfeiffer, also, early in his experiments, found that normal human serum, in doses of three to eight decigrammes, excited a protective action in guinea pigs of 300 grammes weight, counteracting the effect of a fatal dose of typhoid bacilli. He holds, however, that the protective action of normal serum and that of serum from typhoid convalescents are not the same, the former simply immobilizes the bacilli and prevents their increase if given in adequate dose; the latter destroys the bacilli by causing their dissolution or disintegration. There is, therefore, a qualitative as well as a quantitative difference in their action. It is evident from the foregoing statements of various observers that normal blood serum contains substances which act strongly upon the bacteria when the latter are introduced

into the body. In the case of the typhoid bacillus, they are able to at least hinder its growth and activity, if not to destroy it."

So much is known or conjectured in regard to the nature of the cause of this peculiar reaction. But enough has been given to show the possibilities lying within the new discovery, as a prompt and fairly accurate method of diagnosing suspected cases of typhoid; valuable because so prompt and also for its simplicity.

DISCUSSION OF PROF. BURRAGE'S PAPER.

Dr. Hurty—This method of diagnosis of typhoid fever is certainly one of the great discoveries of the age. It has not been brought to its highest perfection yet, that is very certain, but it will be there in due time. I was present at Buffalo when Dr. Wyatt Johnson first brought forth this idea of diagnosing from dried blood. As I remember, he had five bloods presented; three of them were from cases of typhoid fever, known to be typhoid clinically; two of them were blood from well men. He picked out with absolute certainty the three cases of typhoid fever; the other two, of course, were negative. Since then he has been in continuous study of this subject, and from time to time has issued pamphlets concerning his progress. One of the most necessary points in this diagnosis is to have a perfectly fresh culture of the typhoid fever bacillus. Dr. Johnson never uses them when over two days' old, planting them every morning and always having them ready. I think it is easy to predict that ere long this method will be so perfected that the bacteriologist will be able to anticipate the physician several days in the diagnosis of typhoid fever.

When the bacteriological diagnosis of diphtheria was first put before us it did not in many instances agree with the clinical diagnosis. But as time went on the clinician found that there are inflammations in the throat not accompanied with membranes that are diphtheretic, and that there are inflammations that are accompanied with membranes that are indistinct, yet diphtheria exists, because Loeffler's bacillus is there. Now the clinician is gauged and controlled by the bacteriological examination. All controversies are easily settled. There are a great many cases of diphtheria that have not the clinical symptoms that are set down as merely red throats. It might be that it would turn out so in this

case; that what is determined to be clinically undoubtedly typhoid fever, we find not to be typhoid. I only make this as a suggestion.

Another thought in this connection is this: We find that sanitary bacteriology, which is, of course, a branch of medicine, and belongs specifically to hygiene, is entering more and more into the work of the health officer. The bacteriologist or microscopist will tell us long before we are sure clinically that a certain case is diphtheria. It is another illustration of the many that we have of the division of labor in all branches and all walks of life.

Dr. Hibbard—How long after an attack of typhoid fever can this reaction be observed?

Dr. Burrage—A great many of these cases that were experimented on in these hospitals the data the physicians had to go on were meagre. They have to take the patient's word for it, and in a great many cases you cannot believe what the patients say at all. In one case where there had been no attack of typhoid fever in thirty-seven years, he still had the reaction.

Dr. Hibbard—In that case, it seems to me, the data could not be reliable without somebody being with him to see that he had not had typhoid fever for thirty-seven years. Then, again, in so far as they testified to anything, it is that anything that has the clinical features of typhoid fever, but is not typhoid, may have these features arising out of a previous attack of typhoid fever that he did not know anything about. For instance: Two years ago a physician of my acquaintance thought he had consumption, but would not allow his lungs to be examined. He was going to die of this consumption; he got weak and exhausted, and went two or three hundred miles to his father's to die happy, but came back in three or four months perfectly well, and said he had had typhoid fever. I have had numerous cases which no one but myself believed to be typhoid fever. There are "walking cases," so called, that are prevalent when there is an epidemic.

Dr. Burrage—Another interesting point in connection with the test is that blood from negroes when they are sick with any disease will show the reaction. The full-blooded negroes, according to hospital reports, are not very susceptible to typhoid fever. In hospital

reports they have reported very few cases of typhoid fever in the negroes. In one hospital in New York they said they had not heard of a negro having typhoid in fifteen years.

Dr. Hibbard—What about the time limit? Do you believe as times goes on the immunity will decrease?

Dr. Burrage—Yes, in different diseases it will, but I don't know how that would be in typhoid. I would not want to give any rule for that; it would be almost impossible.

Dr. Laughlin—You gave five days as the time this could be distinguished.

Dr. Burrage—The fifth day is the earliest it can be distinguished by this method.

Dr. Laughlin—Had this case been tested earlier than that, but not able to determine before that time?

Dr. Burrage—No; not until the time I mention. I will say in regard to the cases we examined last evening: Dr. Ferguson brought in four slides of dry blood from the hospital, and the two that he clinically had diagnosed as typhoid fever, or probably typhoid, gave the reaction very nicely. The one which he had about made up his mind was not typhoid fever did not give the reaction, and the fourth one, which was his own blood, I did not examine. That shows pretty nearly the efficiency of the test in a hurried way. Personally I am not very experienced in making tests, but consider that there would have been no question in my mind as to which of those cases were typhoid last evening, and yet I felt sure that my cultures of bacilli were not absolutely pure, although I had nursed the cultures for four or five days to have them pure. Even under those unfavorable circumstances the diagnosis was very clear, and I think in that small number of cases the efficiency of the test was clearly shown.

Dr. Jay—I wish to ask whether the application of this test to some of his cases might not have proved that they were modified cases of malaria.

Dr. Hibbard—I don't know in what relation to malaria does the other stand. This test gives no evidence of malaria at all, nor does

the ordinary inflammatory action give any reaction, so that I don't see the relation between that and malarial fever in examinations by this test.

Dr. Curryer, Secretary of the Board of Physicians—I am a member of the State Board of Medical Examiners, and also the Secretary. We have in press now a circular which we propose to send to the members of the profession in the State. In the first place we are going to send out a copy of the law and a circular explaining our interpretation of the law, so that the doctors at large will understand what is required of them. I will say in a general way that we will furnish you two affidavits; the laws of 1885 and 1891 will both be recognized. The Attorney-General says that your license of 1891 and also of 1895 will be good before this Board. We will have two forms of blanks, one for the graduates and one for the practitioners. We have another blank for those that are going to practice midwifery. We have also a blank in reference to the moral character, that it will be necessary to have two freeholders sign.

I happen to be one of the members who drafted that bill. After these blanks are properly filled out by the doctors, if they were in practice when this law went into effect, they will enclose one dollar to the Board, either by draft, postoffice order or express money order. We prefer to have money sent in some of these ways so there will be no danger of its getting lost. After we have reviewed this matter we will issue a certificate which will authorize the County Clerk to issue to you a license, and you will pay the Clerk fifty cents. The Board have under consideration an embellished certificate, with a blank license appended, that when you take it to the Clerk he will fill it out and affix his seal, and then you will have a copy that will be suitable for framing. This is optional; you do not have to have it, but quite a number of physicians have requested it, and if we can get enough to ask for it to make it pay us to have the plates made, we will issue it.

You are compelled to make your affidavit in the county in which you live. Get the blank from the County Clerk of your county. We will send them to the County Clerk and he will provide them for you. Our circular will probably be mailed next week. The law does not require us to do this, but we thought that as it is a new

law, the profession would be glad to get into the gist of the matter without going to see a copy of the acts in the Clerk's office.

Dr. Leech—How about a man who has lost his license?

Dr. Curryer—He will simply go to the County Clerk and get a certified copy.

You must live in the county where you get your license. We have physicians coming from all over the country and practicing in Indiana. We want them to live in the State. No physician living out of the State can open an office or make arrangements to meet patients in this State.

Dr. Henderson—How about the traveling doctors who live in Indianapolis and go to different counties?

Dr. Curryer—The license is good all over the State.

Dr. Jay—You don't require a graduate to send his diploma as well as his license, do you?

Dr. Curryer—No.

Dr. Hibbard—Do you affix a catalogue of reputable colleges?

Dr. Curryer—We will. We will provide a minimum requirement.

Dr. Hibbard—It was stated in the public papers that where a resident physician had a license to practice, but not from a college in good standing, that you would go back of the license and inquire into the character of the college.

Dr. Curryer—That is right. If the standard of the college is not equal to the minimum of our requirement they will be admitted to examination and \$25.00 will be required. If they fail, in another year they are given another examination, and if they fail on both \$15.00 will be returned to them. We will not give an opinion of any college until we have had an applicant, and when we have had an applicant we will make a list of it whether it is good or bad.

Dr. Jay—I understand you to say you will go behind a license. Will you go behind the license of a man who has been in practice ten years?

Dr. Curryer—This law was passed for the future. There may be men practicing medicine to-day who don't know how many bones there are in the upper leg. If a man says he is from a reputable college, and is not, we will go behind that. When we are apprised of the situation we can go behind the returning board, and the man has his recourse in the courts. We cannot revoke a diploma, but we can revoke a license from the most reputable college in the land. The law provides that the license of a man who is not reputable; who is a drunkard or who uses drugs to an excessive degree may be revoked.

Dr. H.—I know of a medical college that has a chair in the State of Indiana that graduates physicians regularly every year, yet their ability to successfully practice medicine may be questioned. I want to know if a copy of a diploma from this college will be recognized.

Dr. Curryer—No, sir.

Dr. Hanmore—If a person has practiced medicine for a number of years without having obtained a license of any form, and they not having appeared upon the reports of the health officer in the county, what steps would you take in that case?

Dr. Curryer—He would have to come before this Board with his proper credentials. If he has not registered anywhere, he will have to come in as a graduate.

Dr. Ferris, New Castle—I know some physicians who had been, at the time of taking out their licenses, in practice for ten years or more, and they now hold certificates to practice medicine under the acts of 1885. I will ask whether or not their credentials, as they now hold them, will entitle them to a certificate before this Board?

Dr. Curryer—Yes, sir. It is not necessary that one shall take out a new license under the acts of 1891.

Dr. Griffith—Suppose one has graduated a number of years ago, and the college, or rather the professors of the college, have ceased to teach, or have gone into other colleges as teachers, what power and authority have you to determine upon the credibility of the past? In what position do you place the men whose colleges have

ceased to exist? The college has passed out of existence, and yet they have diplomas from it, which was at the time it existed unquestionably reputable.

Dr. Curryer—We propose to respect the license issued by your county until we have other evidence. The decision of the Board is that if a college has been reputable or vice versa, the term in which the physician graduated will be recognized. It does not make any difference whether it is in existence or out of existence, the same facts would prevail; the credibility of the term in which you took your degree will be recognized. If you have a certificate from the County Clerk, the Board would hardly look behind that.

Our Board has been talking a little about having the health officers in the State act in co-operation with us. It is not possible for us to have knowledge of every physician in the State. They may come before the Board with affidavits which we have no reason to criticise. Yet when we issue a license you may criticise the Board, for the person may be utterly disreputable. You can help to purify the profession, which, you know, needs it badly. You know of these things, and if you don't take part and help us, we may make mistakes and be unable to control the matter, and would like you to make charges and complaints, so that we will have something tangible to work on.

Dr. Hanmore—Have you considered the question of treatment by mail, as it is carried on by persons outside of the State?

Dr. Curryer—I don't think we can interfere with the interstate commerce law. That question has not come before the Board yet. These things will come up later.

Dr. Ferris—There is a question relative to itinerancy—whether the Board will have a disposition to exercise any adverse power against those who are itinerant practitioners, and who have observed the law in so far as taking out a license to practice in the various counties to which they go.

Dr. Curryer—We have not taken the matter under careful advisement, but I don't think we can interfere with them. That was

in our original bill, but it was so mutilated that it is only a patch of what it was when it was first introduced.

Dr. Hanmore, Dr. Bence and Dr. Wall, having been appointed a committee to report on the question of burial permits, presented the following report:

Whereas, The death reports as reported by physicians are very imperfect, and therefore misleading, your committee recommend the health officers of the State to use their earnest influence with the undertakers in their several jurisdictions to secure from them death reports of all cases of deaths where they attend the burial or furnish burial goods, giving date of death, name, age, sex, place and cause of death and name of attending physician.

Also, that the State Board of Health furnish the proper blanks to each health officer for distribution to undertakers for such reports until such time as a law can be enacted that will require burial permits.

Paper by Dr. Hibbard.

IS SANITATION A PROPER FUNCTION OF THE STATE?

BY JAMES F. HIBBARD, M. D.,
Secretary Wayne County Board of Health.

NOTE.—Some time in December, 1896, the Indiana State Board of Commerce invited me to read a paper before it at its annual meeting at 2 o'clock, on the 30th of the month, on the question, "Is Sanitation a Proper Function of the State?" which I did, and now, by request, reread it to this conference.

J. F. H.

Mr. President:

The question, "Is sanitation a proper function of the State?" has been propounded for this hour.

Consideration of this question demands attention to three major points, namely, the thing to be done, the power to do it, and the propriety of exercising that power.

Sanitation is everything done to maintain health or to prevent disease. All sanitary measures are activities to remove causes of disease, or, more important, to prevent them arising.

There is sometimes confusion, or at least carelessness, in the use of the terms sanitary and sanatory. They are quite distinct in signification. Sanitary efforts are to prevent disease, to maintain health;

sanatory efforts are to cure disease, to restore health. We should keep this distinction clearly in our minds, both in thinking and in acting; nor should we permit confusion to arise because some things are sometimes both sanitary and sanatory necessities—e. g., well people cannot be maintained in health without pure air and uncontaminated water, nor can the sick be cured without pure air and uncontaminated water.

Dense populations require special arrangements to remove excrement, offal and debris, which, if allowed to accumulate and decompose, would generate disease. Cities construct costly sewers to meet this demand. Even where sewers are maintained in dense populations the ground becomes so foul that water drawn from it is a menace to health, and cities construct costly water works and maintain them at large expense to supply potable water.

These are sanitary measures.

States erect palatial establishments and conduct them at large cost to restore the unsound minds of the insane; cities build and support expensive hospitals to cure the disordered bodies of the sick.

These are sanatory measures.

Both sanitation and sanation are prime factors in the general welfare, and each is an important function of the State. The concern of this State Board of Commerce at this moment is with sanitation.

Sanitation has to do with preventable diseases and disturbances of health, of which there are two chief classes—one known as germ or communicable diseases, the other as toxic or chemic invasions of health.

Within the last score of years it has been demonstrated that a majority of contagious diseases are due to living germs, and now, theoretically, many hold that all contagious diseases are due to living germs. This knowledge has put a new phase on an important part of sanitation. These germs are living cells, so minute that they are only visible through a microscope. Of the smaller ones it requires 25,000 side by side to extend an inch in length. There are many varieties of these microbes, with characteristics in form, size, habits of living and duration of life such that each species has its distinctive name.

The accomplished practical sanitarian must have knowledge of these germs, general and specific, including their methods of transportation and means of access to the human body, otherwise, in his efforts to prevent their coming or stop their work, he is at the disadvantage of struggling with an unknown antagonist and fighting an enemy in ambush.

Cholera is a germ disease that has periodically devastated the world. The germ has a perpetual home and breeding place in Bengal, British India, but never appears in other countries except by transportation, and this has been furnished for the most part by commerce and human travel; nor will it spread from the point of introduction into any country except by continued transportation, which is usually of the same kind. It is a water-borne germ, survives in moist garments and moist soil containing organic matter, and finds access to drinking water through these agents. The cholera germ is more readily destroyed than most other germs that give rise to alarmingly fatal epidemics. Sunshine that dries fabrics loaded with the germs kills them; boiling water, most acids and all germicides destroy them. It is, accordingly, quite certain that if Indiana ever again suffers from an epidemic of cholera it will be reliable testimony that she has not organized a competent Board of Health, with available means to execute its functions, or that popular opinion is so far behind in up-to-date knowledge that it fails to support the efforts of a competent Board of Health.

Typhoid fever also arises from a water-borne germ, but, unlike the cholera germ, it is not an alien immigrant. It has a home in Indiana, as in every other State of the Union. Typhoid fever is usually contracted through drinking contaminated water, and this mostly, perhaps, from wells. This germ is rapidly multiplying in the human system, especially in the intestines, and during the fever are abundantly discharged in the excretions, which are too frequently thrown on the ground without disinfection, and thus reach the ground water, which finds its way to the well and offers the germ to whomsoever drinks the water. This is the common channel through which the typhoid germ is conveyed from the sick to fresh subjects in suburban and rural districts.

I need not call your attention to the prevalence of typhoid fever nor to its seriousness in fatality and in the suffering it causes, or to

its great duration and the consequent loss of time by its victims and their attendants. It is introduced here with the intent to attract your attention to the fact that cholera and typhoid fever are derived from water-borne specific germs, and that neither of them can be suppressed except by keeping its germs out of the water or keeping the germ-infected water out of the people. This is not an easy task, but it can be done.

To prescribe methods of purifying tainted water and to devise plants and apparatus to supply large communities with wholesome water is an obligation, and entirely within the ability of complete sanitation.

Smallpox, diphtheria and scarlet fever are dangerous germ diseases that are communicated by contact of the well with the person or the secretions of the throat, skin or ambient air of the diseased. Air-borne germs are more difficult to suppress or avoid than water-borne, for the obvious reason that air is everywhere and must be inhaled by everyone, regardless of impurity. Purification of air about one ill of either of these diseases is impossible, and isolation of the subjects of them is the chief means of arresting the spread of the contagion and of the protection of the public. To secure isolation, to establish and maintain efficient quarantine in this class of diseases is one of the most difficult problems of sanitation, and calls for the exercise of the highest executive ability, but the qualified sanitarian, clothed with adequate power and means and supported by a just, popular sentiment, can do much to limit the prevalence of these diseases and their mortality.

Sundry other contagious diseases exist that the public welfare demands should be under supervision and management of discreet sanitation, but what has been presented will probably suffice for the purpose contemplated in the presentation of the question submitted for consideration.

There is, however, one other germ disease that should have special mention, namely, tuberculosis, of which the most noted and dreaded form is consumption. This is a water-borne, an air-borne and a food-borne disease; its germs meet us at every turn and assail us more covertly and assiduously than the seed of any other serious disease. It is verily a pestilence that walketh in the darkness and a destruction that wasteth at noonday. It is scarcely a decade since

tuberculosis was fully demonstrated a contagious germ disease subject to sanitary control, a step forward in preventive medicine that widened the field and added largely to the value of sanitation.

And still further, as a personal optimism, I have an abiding hope that sanitation will not cease progress until it masters the means of arresting the boundless contamination of syphilis, which is, for the reason that it is for the most part propagated by willful inoculation, the most inhuman and repulsive contagious germ disease known to civilized man.

The diseases arising from toxic and chemic causes are numerous and often fatal. They are not contagious, and therefore their prevention and suppression are conducted on lines different from the methods pursued in germ diseases; but the knowledge required for the proper management of them is as extensive and profound as that necessary in germ diseases. Among these causes may be cited the suffocative and explosive gases in mines; effluvia from foul sewers, cesspools, decomposing animal and vegetable matter; certain manufactories and their refuse products; in short, everything that renders the air impure and inadequate to support human vitality in full vigor and normal equilibrium. All these causes are within the realm and under the supervision of sanitation.

An interesting movement in sanitation is just now being promoted in all parts of the civilized world by qualified men equipped for the special service. This is the effort to render well people immune against contagious disease by hypodermic injections of prepared serum; that is, the fluid part of coagulated blood. Briefly stated, the plan for this service in diphtheria—which may be presented for illustration—is to inoculate a horse with diphtheria, and when fully prepared, bleed him into a suitable vessel and allow the blood to clot, and inject a proper quantity of the serum into the body of a healthy child, which renders it proof against the contagion of diphtheria. This same serum, of greater strength, when injected into a patient suffering from diphtheria, will cure the disease, so that the serum is both a sanitary and a sanatory agent.

This serum sanitation originated with Pasteur, in France, who, about 12 years ago, began practicing it as a prophylactic against rabies in the human subject. Within a few years it has been attempted in a number of germ diseases besides diphtheria and hydro-

phobia, but in no such instances with proof of success. Serum injections must await further investigations to determine the extent and value of its prophylactic power. Its present status entitles it to careful consideration by qualified scientists.

Besides these measures of direct sanitation, the plans, construction, heating, ventilation and lighting of private and public buildings, so far as their salubrity is concerned, are legitimate subjects for sanitary supervision and direction.

The foregoing is an outline sketch of the great field of sanitation, with a triangulation of the more salient points of the wide domain. More detail is not demanded by the occasion and is forbidden by time.

The thing to be done, as alluded to in my opening paragraph, is the sanitation, as expressed and implied in the preceding pages, and now I seek the power to do this sanitation.

Where is the power to do this thing? The question I am discussing tacitly assumes the power to be in the State. What is the State? The term state is used in common parlance and learned disquisitions to express a multitude of ideas; but in our text question the context of the word state indicates that the author's concept was the State of Indiana. Indiana is a commonwealth, an integral unit of the American Union, retaining the right of eminent domain and all the natural attributes of sovereignty of the people composing it, except those delegated to the United States. Among the chief reservations of the State is the power to secure to its people, all and singular, the inalienable right to life, liberty and the pursuit of happiness. Life can scarcely bring happiness without health, and a valetudinarian is curtailed of his liberty and held in bondage as irksome as that of the prison victim of a tyrant, and pursuit of happiness is barred to the ill and to every invalid. The mission of sanitation is to prevent or remove all things inimical to health, and as the State of Indiana has paramount authority to devise the plan of sanitation, put it in operation and enforce its final execution, it is by this token we realize that the power to do this thing for us is in the State of Indiana.

This brings me to the third and final major point presented in my analysis of the original question for argument, namely, the propriety of the State exercising its power to functionate sanitation. If my premises are sound and my argument logical, there can be no

hesitation in declaring the propriety of the State doing sanitation; indeed, they go further, and are in evidence that if the State of Indiana neglects this service of sanitation, she fails in one of her highest functions—the one bearing the richest humanitarian fruit, the one most cheering to honest industry and the promotion of commercial prosperity.

All classes of sanitation are under the dominion of the State. There must be personal and family sanitation; village, town and city, township and county sanitation. Each has a distinct role to carry out, but the State must plan, direct and harmonize the entire scheme. If the State wholly fail in this, desolating epidemics will sweep over her fair territory and her children will perish; endemics will decimate her cities and rural localities, and the whole population will become sallow, suffering, nonproductive invalids. Neglected sanitation means dirt; successful sanitation means cleanliness. There is good authority for the aphorism that cleanliness is next to godliness, and accordingly, sanitation is not only a joy on earth, but possibly a help toward heaven, and without question, promotes and supports moral rectitude. We cannot live without some sanitation; we cannot live right without much sanitation, and general sanitation must be formulated and administered by the State. For myself, I am ready to answer without hesitation and with decided emphasis the question submitted as my text: Yes; sanitation is pre-eminently a proper function of the State of Indiana.

NATURAL GAS IN RELATION TO DISEASES OF THE EYE.

BY DR. KYLE, MARION, IND.

The illumination from Jumbo and large burners has a very bad effect upon the vision of children. This is especially so in children ranging from the age of 3 to 12 years, as it would appear that the eye at these ages is more susceptible to the constant flickering of the gas light than at any other time. This causes a condition known as asthenopia; that is, sensitive eye, and is soon accompanied, in a

majority of cases, by hypertropia or far-sightedness. Children complain of headache and blurring of vision after using the eyes for a time, with a heaviness of eyes. On examination we may find slight tenderness of eyeballs, with congestion of optic nerve. As hypertropia is the prevailing complaint, we correct this with a weak convex lens. Under the use of the glass the asthenopia soon passes away, and likewise, in a few months, or a year at the utmost, the hypertropia, if slight, likewise passes away, or at least sufficiently to enable the patient to lay aside the glasses.

The burned gas, which contains the sulphur oxides, is an irritant to the conjunctiva. With this irritation constantly present, the patient is susceptible to catarrhal inflammation and granular or follicular conjunctivitis. It would thus appear that all children showing the least irritation of the eyes should have them carefully examined, and if any defect in vision is found, it should be corrected, thus removing a condition which might, if neglected, result in a lasting hypermetropia or myopia, a far-sighted or near-sighted condition. It would also appear, from limited observation, that all burners used for illuminating should be condemned and oil lamps substituted.

SOME THOUGHTS CONCERNING NATURAL GAS AND ITS RELATION TO PUBLIC HEALTH.

BY A. A. HAMILTON, M. D., MARION, IND.

Natural gas is undoubtedly a great boon to any community fortunate enough to possess it, provided always that it is properly utilized; but great care, as well as good judgment, must be exercised in adapting this agent to the requirements of modern civilization, if we would escape the baleful consequences likely to follow its improper use for heating or lighting purposes.

As it comes from the mains this gas is irrespirable, and when inhaled alone it quickly causes dyspnoea, asphyxia and death. Owing to its combination or association with a readily perceptible amount of sulphuretted hydrogen, its presence may quickly be detected, and accidents thus avoided.

The products of its combustion are said to be nitrogen oxides, carbon dioxide, water vapor and sulphur dioxide and trioxide. The two latter are promptly converted into sulphuric acid, and it and the compounds above mentioned not only vitiate the air of the room in which they are set free, but in one way or another these liberated products prove injurious to nearly everything coming within the range of their influence.

The householder who uses natural gas for heating or lighting his home soon has ocular proof of its destructive properties. If, for instance, an ordinary smoke or bell-glass is suspended over the flame of a Jumbo burner for a few days or weeks, it is soon found that the resulting vapor is condensed thereon into an amber-colored fluid, which collects along the fluted or corrugated margin of the dependent glass; and, unless care is taken to remove it, this fluid will fall, drop by drop, upon the carpet, upholstered furniture, lounge cushion, etc., beneath it, with the result that a hole will be burned or eaten through the goods at every point touched by this concentrated fluid.

This gas, or the products of its combustion, also injure the piano strings, rots the rubber, burns and discolors the wall paper, tarnishes the gilding on the picture frames, corrodes the brass or silver with which it comes in contact, etc. How or why it produces these effects it is not the province of the physician to point out; but these facts are of themselves sufficient to cause the ordinary observer to conclude that an agent capable of exercising such powerful influences upon the external objects surrounding him must be, under certain circumstances, prone for evil as well as for good, as relates to its influence upon the human economy.

This conclusion is apt to be confirmed in the mind of the person who personally experiences the unpleasant, not to say distressing, effects resulting from even a short sojourn in the gas-heated homes of many of those who use this precious gift of nature as a fuel or illuminator; and, in addition to the evidences of its corroding or corrosive effects upon the other contents of the house, or even the house itself, the dullest observer realizes that even he is not exempt from its all-pervading influence. Naturally, therefore, he attributes the feeling of suffocation; the sense of constriction and irritation of the throat; the irresistible, dry, hacking cough, the dull

headache and the feeling of languor or stupor which he experiences after a short confinement in the dormitory or living apartment of the gas-heated residence to this agent or the products of its combustion.

It is not, however, the purpose of this paper to enter into a lengthy discussion of this theme or to point out the various ways in which natural gas or its derivatives may prove deleterious to the health of the human subject—if, indeed, they have any positive and palpable injurious effects at all; but it seems difficult to refrain from concluding that an atmosphere saturated with sulphuric acid and the other agencies above enumerated to an extent sufficient to render it capable of corroding or otherwise destroying the various fabrics and metallic objects subjected to its influence, must of necessity possess the power of injuring the mucous tissues of the nose, throat and lungs and the other tissues and organs with which it comes in contact, to say nothing of the possible consequences liable to follow the circulation through the brain and other internal organs or a blood current more or less below par because of the inhalation of this vitiated atmosphere.

To specifically point, however, to the precise method of their production, or to indicate particular instances of disease, or diseased conditions clearly attributable to this cause alone, might, as above suggested, be difficult or even impossible, notwithstanding the fact that it is no unusual thing to hear residents of the gas belt crediting their ailments to the injurious influences of natural gas.

Special and concerted investigation along this line can alone determine as to the character and extent of the resulting evils, if any there be; and pending such special study and investigation the people should be admonished as to the desirability, if not the actual necessity, of at least observing ordinary care and caution in guarding the person, as well as the property, of individuals from possible injury due to the careless or improper use of this agent; and if it be the purpose of the State Board of Health to instruct our citizens as to the correct method of employing this product for domestic purposes, such action would certainly be both timely and appropriate.

Whether or not natural gas or the products of its combustion directly injures the organs or tissues of the body or prejudices the

health of the exposed person, may possibly be questioned; but it cannot reasonably be doubted that women and children who spend much of their time in the superheated and illy ventilated rooms of some of our gas-heated residences must at least suffer indirectly from these conditions.

Householders should, therefore, be cautioned against the prevailing habit of keeping rooms heated by gas too warm, and they should also be instructed as to the necessity of making some provision for the free admission of fresh air into the apartment, in order that a reasonable supply of oxygen may be furnished to the inmates for breathing purposes.

NATURAL GAS IN RELATION TO DISEASES OF THE EYE.

BY M. T. JAY, M. D., PORTLAND, IND.

Natural gas in relation to diseases of the eye, is a subject about which there has been but little written or said, and if I fail to write or say anything of interest, the responsibility for such failure must rest with Dr. Hurty, for he suggested it. However, if there is any credit to be bestowed, I am perfectly willing to be the recipient of the same.

That natural gas does exercise an influence over the eye and its diseases is undoubtedly a fact, and the manner in which it operates we shall inquire into. In the gas belt the principal illuminant used is natural gas, of course, and while electricity and coal oil lamps are used by many, yet I am safe in saying that three-fourths of all methods of artificial lighting is by natural gas. The flames from the various forms of gas burners have, with the possible exception of one—the Welsbach—one invariable, pernicious characteristic, and that is a constant flickering, ebb and flow motion. As a result of gas lights we usually have an under or over illumination, and upon this fact depends the evil results of such illuminant. The flickering motion referred to above has a tendency to act as a series of shocks upon the retinæ, similar to the faradic current upon a muscle or nerve, the continuous movement of the image, its in-

crease and decrease of brightness, subjects the accommodative apparatus of the eye to similar shocks in the effort to accommodate for the ever wavering image, resulting in fatigue, headache and dizziness.

I have observed that errors of refraction are more troublesome and more difficult to bring about a satisfactory condition of the eyes where the gas light is used than where it is not. Many individuals imagine that they need glasses when in fact they have only been reading by a Jumbo gas burner six or seven feet away, and when we tell them to change the source of their light and give their eyes rest, the next we see of our patient is his or her majestic appearance up street with a pair of glasses, gold washed frame, plain lenses for which some itinerant optician adjusted for "compound hypermetropic astigmatism with insufficiency of internal recti" to the tune of \$10 or \$12. Presbyopia seems to occur earlier in some cases where gas light is used and a stronger lense is demanded for the night reading than for the day. One patient I had dispensed with the use of his glasses entirely after having his place of business fitted with electric incandescent lamps. The explanation of this surprising sequel is, I believe, that under the unsteady nature of the gas flame above referred to, the retina demands a larger image, and the glasses must supply this demand so that when the source of light is changed to a more uniform character, the glasses will be no longer acceptable.

In hyeprmetropia, asthenopia is more burdensome and patients will frequently return, demanding that their glasses be changed. On questioning them about their light we invariably find that they have been using a Jumbo burner, which is usually entirely too far removed from the eyes, and when a change is made the glasses then are found sufficient. In astigmatism and muscular insufficiencies, the above applies about the same. In myopia, I can readily see how the error could be induced or increased by using the imperfect gas light, the child in its effort to get a clear, distinct retinal image approximates the book to its eyes, the eyeballs are converged, the external recti are drawn tightly along the side of the ball exerting a pressure that will have a tendency to elongate the ball, which is yet in a formative condition, thus increasing the antero-posterior diameter, producing myopia. The standard for artificial illumina-

tion, as given by Cohn, is that the minimum intensity of light should equal that of ten-metre candles, a metre candle being a standard candle placed at the distance of one meter.

Retinal fatigue is the most prominent symptoms of the conditions arising from the use of the ordinary gas burners, manifest in a wearisome feeling of the eyes, inability to hold the lids open, headache, dizziness and other remote symptoms. This includes the disturbing influence of the peripheral diffuse retinal illumination upon the perception of the macular image; hyperæsthesia of the retina from continued use of the eyes under the same untoward influences is a concomitant symptom.

Inflammatory diseases of the eyes are but slightly affected by the use of gas as an illuminant. I recall one patient with chronic trachoma, who thought that the gas lights brought about a feeling of dryness that he did not experience under any other circumstances, and for this reason, after twilight, he would never leave his room, which he kept very dark, and his eyes were not greatly inflamed, either. The dryness of the air of the room, produced by the burning jet, would probably account for this unpleasant feeling.

The effect upon the nervous system acting through the channels of the optic nerve and retina, of the imperfect illumination, I have not touched upon, although it is possible that many nervous difficulties are engendered by this means. The remedy for the ills that have been enumerated is indeed simple. One plain duty only remains for him who would conserve that wonderful structure, "those windows of the soul," the human eye, from disease and death. To the grand aggregation of flickering, glimmering, wavering, pernicious, discomfort-breeding gas burners I say: "Mark how plain a tale shall put you down." For reading, a student lamp, slightly above the level of the eyes, to the left and rear about one meter, is the story told. For general illumination, electric incandescent lamps.

SOME OBSERVATIONS UPON THE USE OF DIPHTHERIA ANTITOXIN.

BY HUGH A. COWING, M. D., MUNCIE, IND.

It might seem to be a work of supererogation to present any further facts relating to the use of antitoxin in diphtheria. But a spirit of opposition to the serum treatment still appears in some of our medical journals. Therefore, I desire to contribute my mite of experience in the interest of truth and the advancement of medical science.

At the last meeting of the American Medical Association, at Philadelphia, the serum treatment of diphtheria was opposed in two of the papers read before the section on diseases of children. Because of the prominence shown these papers it may not be out of place to give them brief attention.

In the first place, we noticed that their opposition to the use of antitoxin is a mild one.

The experience of one of the writers was limited to one injection. He states that "I used it for the first and only time on a clergyman, and immediately after its use he commenced to vomit, and continued vomiting for some 12 hours. After using many remedies to check the vomiting without success, I finally stopped all medication and gave the stomach absolute rest, when he commenced to vomit mucus streaked with blood. At this stage I used morphia and atropia hypodermically, which stopped the vomiting at once. The vomiting was probably simply a coincidence and had nothing whatever to do with the injection of the antitoxin; but the vomiting starting so promptly after its use, left me in doubt as to its value."

The writer quotes the statements of a few physicians who are opposed to the use of the serum and devotes much space to the other well-known forms of treatment, and gives them preference. In the treatment suggested he has really nothing new to offer.

The writer of the other paper begins by saying: "I have had very limited experience with the remedy, but as yet cannot feel that it is worthy of the advertising it has received at the hands of the profession."

His objections to the serum are, briefly:

1st. The producers of antitoxin would have this admittedly dangerous remedy injected into those suffering from the slightest sore throat, even into the well persons of the household.

2d. In those cases that are seen early, why not destroy the bacilli in the throat by the use of local antiseptics instead of resorting to antitoxin?

3d. The use of antitoxin causes great pain and fright, especially in small children, and this alone might be a cause of death.

4th. He regards antitoxin in the same light as the proprietary medicines and foods advertised in our day; it undoubtedly has some virtue, but is no better than other judicious treatment.

It is worthy of note that in the discussion following these papers the serum treatment of diphtheria was most earnestly indorsed by the great majority of physicians participating. The report of this discussion, together with the papers indorsing diphtheria antitoxin, as recently published in the Association Journal, form a valuable contribution to medical literature.

I shall not take the time to quote the abundant evidence in favor of diphtheria antitoxin as presented upon that occasion, but I desire to give a brief summary of my experience in the treatment of diphtheria since the introduction of the serum treatment. Some of the cases reported I saw as attending physician; others as county health officer.

The fall of 1895 was marked by a severe outbreak of diphtheria appearing in various parts of our (Delaware) county. As usual in severe diphtheria, under all the old forms of treatment there were quite a number of deaths. Finally, in the face of much opposition, the serum treatment was employed with results that were positive and gratifying. But even then there was much to learn concerning the employment of this new remedy. The dosage, and especially the relation of dosage to age and to the severity of the disease, the influence of age and heat upon the potency of the serum, the choice of syringes and the manner and site of injection—all these and other points were to be learned. The experience of more than two years has fully confirmed the sanguine hopes and proven the earnest claims of the advocates of antitoxin in 1895.

The intelligent laity to a great degree recognize the worth of the serum treatment, and are solicitous that it shall be used. No untoward results from its use in any instance in Delaware County have been reported. The prompt and complete recovery of so many malignant cases treated with antitoxin by various physicians in our county proves its efficacy, to their great gratification.

Personally, my experience with antitoxin is limited to about 50 cases and covers a period of a little over two years.

Briefly I desire to relate the histories of a few of these cases. In 1895, in the Yorktown epidemic of diphtheria and in some other localities, antitoxin was used not as an experiment, but because of the death rate under the old treatment and because of the faith which we had in those high in medical authority who so strongly recommended the serum. But it was a new remedy used in a new manner, and in using it we walked by faith and not by sight. Our authorities then did not know, as now, that it is sometimes to be pushed to the large dosage which we now use with such confidence. I have no doubt but that the failure to cure some of the severe laryngeal cases with antitoxin has been due to the small doses of 1,000 to 1,500 units given only every 18 or 24 hours.

The following histories taken from my note book may contain some points of interest:

November 12, 1895, I visited cases of diphtheria in the family of Cornelius Halstead, near New Burlington, in company with Dr. A. H. Good, of Selma. One child two years old died with the disease a few minutes after we arrived. Two other children were seriously affected, having had the disease for 24 hours. We injected both children (Cleveland, aged seven, and Myrtle, aged four) with 10 c. c. each Mulford's antitoxin. As no other clean vessel was available, I sterilized the syringe by boiling it in a fruit can. Injected on outside of thighs, after washing with soap and water. No sore resulted. Children made good recovery, with no untoward symptoms. No other injection given them.

December 12, 1895, with Dr. A. H. Shively, of Yorktown, saw two cases of diphtheria in family of Rant Compton. The 14-year-old son had been sick one week. Was in a critical condition. Fauces glazed with gray exudate and swollen. Horribly offensive. Exudate also filled nostrils. Heart weak. Gave opinion that he

would die. At earnest solicitation of family I used 10 c. c. Berhing's antitoxin in boy's hip (left). Recommended to Dr. S. to use alcohol freely internally. Boy rallied during night, but at noon next day (13th) was failing rapidly, and died at 1:30 p. m.

Girl, aged six (on 12th), had malignant case of over 24 hours' standing. I injected 10 c. c. Mulford's antitoxin into right hip. Had no more of the remedy with me, or would have injected other boy, not yet affected. Returned next day (13th). Girl seemed better, though exudation in throat was present, yet whiter. Gave her 10 c. c. Mulford's in right thigh. Also gave boy, aged eight, 5 c. c. His throat somewhat reddened and swollen. Both recovered.

September 26, 1896. Frank Tuttle, aged 10, at Cowan. Dr. McKinney attending. Patient sick one week with pharyngeal diphtheria. Hoarseness and croupy cough had developed in last 48 hours. Child quite restless. Voice indistinct, whispering and husky. Injected with 10 c. c. Parke, Davis & Co. Next morning Dr. McK. gave 5 c. c. and in the evening 15 c. c. Recovered.

November 17, 1896. I visited cases of diphtheria with Dr. Dill near DeSoto, in family of J. W. Snider. Ten-year-old daughter sick ten days. Pulse rapid; fairly good strength. Fauces glazed, but little membrane. Dr. Dill said that for the last five or six days membrane was extensive. From about the fourth until the seventh day patient was comatose. Is now listless, lies quiet and speaks rarely, but then fairly and distinctly. No antitoxin had yet been used. Did not advise it. Treatment had been Loeffler's sol. and listerine locally. Tonics as Bland's. To-day patient took more nourishment than usual. Finally recovered, but convalescence slow and marked by characteristic paralysis.

In family of Heston Sheller, seven-year-old daughter sick ten days. Pulse weak and rapid. Considerable membrane in throat and nostrils. Died next day at 9 a. m. (18th). No antitoxin used. Did not advise it.

At same time, also, saw 18-year-old daughter. Sick three days. Some membrane in throat, on pharynx and tonsils. General condition excellent. Had 10 c. c. first day, five second day and recommended at least 10 more to-day, which was given. Recovered.

September 5, 1896. Saw 10-year-old son of Jas. Kennan. Had slight deposit upon tonsils. Could not be convinced for three days

that it was true diphtheria, but membrane spread to pharynx. Used ordinary treatment—peroxide of hydrogen, Seilers, strychni. Recovered in three weeks, with slight paralysis of vocal cords lasting two weeks longer.

November 12, 1896. Was called to see the six-year-old daughter of Jas. Keenan. Family was alarmed because the little girl had just had a severe choking spell. Examination showed that the case was one of membranous croup (diphtheria). I could see the membrane low in pharynx. Breathing hurried and obstructed. Some fever. Returned to city and procured 10 c. c. P. D. antitoxin, which I injected into child. Repeated dose next evening. For three days hoarseness gradually lessened, membrane cleared and child recovered promptly in five days.

December 1, 1896, visited four-year-old son of Charles Southern, West Side. Mother noticed some membrane the day before, and child was quite feverish. That night was extremely restless. When I called, found membrane on tonsils and up to uvula. Evening of 1st gave 10 c. c. P. D. antitoxin. Next afternoon membrane clearing. Child much improved and had passed a good night. No more injections given. Recovery complete.

December 3, 1896. Was called by Dr. Frazier, Whitely, to see six-year-old daughter of Charles Leffel. Diphtheritic croup. Breathing rapid and difficult. Frequent croupy cough. Pulse rapid. Slight rise of temperature. Sick since November 27. We injected P., D. & Co.'s antitoxin, 10 c. c., in thigh. At noon next day Dr. F. repeated dose. She died at 5 p. m. (4th).

October 10, 1897, 9 p. m. Saw Miss P., aged 17. Diagnosis then in doubt. Temperature about 102. Tonsils considerably swollen. Patches on right tonsil. Submaxillary glands enlarged. Saw her next day at 2 p. m. Plainly diphtheria. Membrane massed in throat. Temperature 104. Throat much swollen. Salivary and cervical glands enlarged. Patient uneasy. Speech difficult. Deglutition ditto. Thirty days before patient's sister was taken with scarlet fever, but patient was kept from home on discovery of the nature of the disease, and did not return until five days after a thorough disinfection of premises. But sister had some nasal discharge which may have contained contagion. Is this scarlatina anginosa or diphtheria, or both diseases? Patient's bowels had been thoroughly moved in the forenoon shortly before I found

this high temperature. Three p. m. gave 2,000 Mulford's potent diphtheria antitoxin. All injections made in scapular region. October 21, 7 a. m., temperature $102\frac{1}{2}$, throat greatly swollen and membrane covering pharynx and tonsils, extending forward on palatine arch. Patient had a restless night. Considerable odor from throat. Used 2,000 units and in evening 1,000 units. The next day fever about the same, but general improvement was noticeable. Used 1,000 units. On the fourth day a scarlatina-like eruption appeared, except on face. My opinion is that this was a case of scarlatina anginosa, with delayed eruption. This patient completely recovered.

I close with a contrast between two laryngeal cases. The one I treated nearly two years ago, giving to the six-year-old boy 1,000 units each day for three days. The disease was of a severe type, the dyspnoea, the aphonia, the violent croupy cough, with great restlessness, and the appearance of membrane in the pharynx also, all proved the nature of the disease. The effects of the serum were gratifying, and the boy recovered; not, however, so rapidly, I believe, as he would had the dosage been doubled. I make this statement because it has been recently borne out by my experience in a similar case.

On October 27, 1897, I was called to see a boy six years old, affected as I have described in the other cases. There was considerable fever, and I could see the thick, grayish-white membrane in the lower part of the pharynx. He had been sick two days and quite croupy the night before. It was then nearly noon, when I gave him 1,500 units, and at 10 p. m. 1,000 units P., D. & Co. The next morning at 11 I gave him 2,000 units and at 10 p. m. 1,500 units. On the third day he was much improved, but I took no chances, and gave him 1,000 units at 7 p. m. In about 55 hours this six-year-old boy took 7,000 units. The effects were more decided and recovery more prompt than in the case where the smaller doses were used. My visits to the last case were unnecessary after the last injection. There was no paralysis nor weakness. In fact, with his recovery the boy developed an inordinate appetite. He is now strong and well.

In conclusion, I would make the following observations:

1st. Fresh diphtheritic antitoxin scientifically prepared is perfectly harmless.

2d. When given early and frequently repeated (within 12 to 18 hours) it is almost a specific against diphtheria.

3d. The dosage should be large and the injections frequent, especially in severe and laryngeal cases.

4th. The injections should be made under rigid antiseptic precautions and should be made in the scapular or gluteal regions.

5th. The syringe should be large enough to contain the full dose for each injection. The needle should be as small as possible.

6th. Children require nearly, if not quite, as large dosage as adults.

7th. Antitoxin is indicated in scarlet fever with diphtheritic throat.

8th. The prophylactic immunity from diphtheria through antitoxin lasts about 30 days.

9th. Age and heat diminish the potency of antitoxin.

HYGIENE OF FOODS AND DRINKS.

BY J. W. TAYLOR, M. D.

Believing, as I do, that the extravagant consumption of unhealthy foods and drinks by the American people has something to do in preparing the human organism for the reception of disease, it seems to be a suitable subject for consideration by this body of Health Officers. A few years ago one of New Orleans' most distinguished physicians made the statement that in an epidemic of yellow fever in that city over 2,000 of the drunken and dissolute died of the disease, before any one who had lived soberly and prudently was attacked by it. In the last severe visitation of yellow fever in the city of Memphis Dr. W. A. McCulley, of Independence, Kansas, went as a volunteer physician to that city, and was placed in charge of the Gayosa House which had been converted into a hospital. After the close of the epidemic the Doctor stated to me in a letter that there was not one patient in his charge that died of the disease who had been a total abstainer from alcoholic liquors and who had lived prudently in other respects. And I presume there is no physician of any experience in the treatment of

epidemics of disease but who has had his mortality list largely increased from among the broken-down constitutions of those who have lived in open violation of the laws of health.

That the great mass of the people utterly ignore all the laws of health is a fact of tremendous import. Says a writer in a late number of "Food:" "It is passing strange that so little attention is given to the subject of food hygiene, and that there is so great a lack of systematic training in the family in this regard." Now had that writer reflected a moment he could have accounted for this lack of training in families from the fact that the heads of families had never been trained themselves, and therefore knew nothing of the importance of such training. The great body of the American people seem to care nothing for the laws of food hygiene and therefore the whole dietary of the masses has no reference whatever to the actual needs of the organism, but is guided and directed by the customs and fashions of the day and the craving of morbid appetites. These customs and fashions are introduced by the upper circles of society, and from an innate principle in man to look to those he supposes to be above him for guidance, each class is striving to adopt the habits and customs of the one above it. Therefore, in all the extravagant display of foods and drinks in the American dietary there is not only bad selections of foods, but in the preparation for the table its healthfulness is but little considered. A few years ago while Orange Judd was publishing "Health and Home," a weekly paper, he sent a request to his subscribers to send to him a bill of fare of their everyday meals and how they prepared the food. Numbers of his subscribers responded to the request and so nearly universal was the food prepared by frying that Judd named the utensil "the infernal frying pan." And this infernal implement is yet extensively used in the preparation of the food of American families, hence we have become a nation of dyspeptics. But this is not the worst feature of the American dietary. It has two glaring defects, the bad influence of which may be traced in all classes of society. The first of these defects is the stimulating quality of the food which goads the nervous system up to its highest tension; but after the stimulation passes off the vital activity runs down below the normal standard and remains in that condition, constantly demanding additional stimulants. The special articles of the dietary that produce excessive stimulation are coffee,

tea and the flesh of animals. There is no nation of people that consumes so much meat per capita as the American, and there is no class of our people that do not eat excessive quantities of it. The American housewife would hardly know how to prepare a meal without meat, and especially is this the case among the laboring classes. That meat is a powerful stimulant as well as a food is a fact recognized by the profession, and its stimulation is mostly exerted upon the appetites and passions. As a result of this stimulation the Americans generally, and especially the upper classes who do not perform physical labor, eat too much, and the organism becomes surcharged with crude, unassimilated food products which throws an excessive labor upon the eliminative organs. This excessive labor soon weakens these organs to such an extent that they become unable to relieve the organism of this noxious product, and the individual becomes a fit subject for any disease.

The second great defect in the American dietary is its lack of sufficient nutrition for the brain and nervous system, hence brain fag, nerve exhaustion and heart failure are the almost universal cry of the American people. With a country that furnishes an abundant supply of food material that will amply build up and sustain the human organism in the best condition it can reach if properly used, the suffering and premature death caused by an insufficient supply of nutrition to the brain and nervous system becomes the great crime of the age. Along with the progressive steps of what we are pleased to term civilization and intensified brain function, the brain nutrition is more and more stricken out of the food. The great staple of the food of all civilized peoples is wheat, and scientists assert that the wheat grain contains every element of food material needed by man and about in the proper proportions. As a distinguished horticulturist said of the strawberry, "God might have made a better fruit than the strawberry but He never had;" so we can say that possibly God might have made a better food material than wheat, but if it has been made it has never been discovered; and no country can produce this grand staff of life in such profusion and perfection as this "land of the free and home of the brave;" and yet in our dealing with this admirable food material, scientists have racked their brains to invent machinery to take out the nutrient material for the brain and nervous system and give to the housewife the starch of the wheat to make into food for that being that

is endowed with the most highly wrought brain and nervous system of any other being that exists upon the earth. Surely if this is not desecrating God's best gift to man I do not know how it **can** be done. And this desecrated food material is taken by the housewife and made into numberless preparations for the table, and these constitute nearly one-half the food of the people, and most of the other half is as destitute of nutrition for the brain as the defrauded wheat flour. To show the extent of the loss of brain nutrition in the white flour permit me to quote from Dr. Smith's work on "Foods." He gives the proportion of nitrogenous principles in the best quality of wheat as 13.5 per cent. and phosphates as 1-7 per cent., while in the best quality of white flour, the amount of nitrogen is only 1.7 per cent. and of salts only 7-10 of 1 per cent. That foods made from such material may support life for a time in an adult who makes no mental effort whatever is true, but that such foods should be given to children during growth and school life, when the brain is taxed to its utmost power of endurance, is a wrong to the rising generation that should not be tolerated in this closing decade of the Nineteenth century. With such a regimen is it any wonder that insanity, neurasthenia and all manner of nervous diseases are increasing to a most alarming extent? With the stimulation of a portion of the food and the extravagant quantity and variety provided and the too frequent indulgence in the bountiful supply, together with a fatal lack of nutrition to the brain and nervous system in it all, it is utterly impossible to sustain the human organism in a state of health and vigor. And yet the great body of the people do not know that there is anything wrong in their mode of living, and when sickness comes and the physician fails to restore the organism back to health, and death is the result, the affliction is charged up to a dispensation of Providence.

Now ladies and gentlemen of the medical profession, I am not vain enough to believe that in all that I have said there is anything new to you, and many of you no doubt could draw a more vivid picture of the errors in the American dietary than I have done, but the great question for us to consider is what relation do we, as practicing physicians sustain to this question? May not each one of us ask in the language of Scripture: "Am I my brother's keeper?" If I understand correctly the true mission of the physician, we must give to this question an affirmative answer. From

the very nature of our calling the people must and do look to us for instruction in all matters relating to the preservation of health. And while the medical profession has made wonderful strides in the treatment of disease, I fear it is not doing its whole duty in teaching the people the more important lesson of preventing disease. It therefore seems fitting and proper that Boards of Health should take the lead in this work. I know from personal experience that this is a delicate task to perform, for the people do not wish to have their fashionable vices ventilated, and the physician that leads in this work will be likely to lose caste for his effort. The people when sick expect the physician to cure their diseases by the administration of medicines, and they do not want his advice as to how they should live to avoid disease. And while one physician can do but little in establishing correct modes of living by the mass of the people, yet organized Boards of Health and medical societies in all the towns and cities can, by faithful and judicious effort, do wonders in securing amenity from disease. Already by quarantine and correct sanitary regulations it has disarmed the devastating contagious and infectious diseases of their destructive virulence. This has been a grand and noble work and entitles the Boards of Health to the lasting gratitude of all the people. But in my judgment this is not the end, but only the beginning of the work of Boards of Health and medical societies. There are numerous diseases that are recognized as preventable, and yet these preventable diseases are yearly destroying their victims by the thousands. It therefore becomes the duty of physicians to instil in the minds of the people the importance of bringing their lives in strict harmony with the laws of health in order that consumption, typhoid fever, diphtheria and all kindred diseases may no more destroy the flower of the land. The only channel for Boards of Health to reach the people is through the medical profession at large. If we will examine the dietary of the medical profession as a whole we will, no doubt, find it only differing from that of the common people in being more luxurious and farther removed from the true laws of health.

Now if there is anything to be learned from the study of the history of the human race, it is the great fact that man was intended by nature for a plain and simple mode of life in all things, and especially so in the foods by which his life is sustained. Nineteen centuries ago when Jesus of Nazareth was passing through his

country on a Sabbath day, feeling the need of nourishment, He and His disciples entered an adjoining wheat field and rubbing out some of the heads of wheat they made a bountiful repast on the best food in the world just as it came from the hand of nature.

Capt. Howland, who owned a vessel that plied between Boston and St. Petersburg, Russia, stated that when he arrived at the latter place he was frequently compelled to secure the services of the Russian peasants to help load and unload his ship; that many of the men he engaged were eighty and even ninety years old, and these old men would do more work in the long days of that northern latitude than the best of his own men, and they always brought their food with them, which consisted of black rye bread and a bunch of garlic.

Now a very important lesson is here presented for the consideration of the physician of to-day. When tempted to partake of the luxuries and extravagances of the Nineteenth century dietary, he should show to the people the injurious consequences that must inevitably flow from their indulgence, and point out the better way to live. For such teaching to be effectual the physician must show his faith in his teaching by living true to its principles himself. Society is looking to the medical profession to show it how to live in order to secure health and happiness, and these words really mean the same, for the person that so lives as to secure perfect, bounding health can hardly be unhappy.

It is evidently true that the moral status of the people is just as certainly affected by their mode of living as is their health. The two leading factors that effect the lowering of the moral standard of the people are the twin relics of barbarism, alcoholic liquors and tobacco. It is true that but few physicians of the present day indulge in the use of spirituous liquors, but by prescribing them to their patients, especially in chronic diseases, a taste for the alcoholic stimulant is fastened upon the patient that in too many cases brings about a ruin worse than death. In speaking of the use of tobacco I am aware that a majority of my professional brethren indulge in the fashionable habit of smoking. Let me say then, that while I do not wish to wound the feelings of any one, I must be true to my convictions of duty. That tobacco is a virulent poison is a well established fact. That a portion of its active poisonous principles is absorbed into the blood in the act of smoking is proved by the exhalations that are given off by the breath and bodily surface of the

smoker. That such a virulent substance can be carried through the organism with the blood and leave no injurious effect is certainly a very illogical conclusion. That many of these injurious effects have been proven beyond cavil by some of the ablest minds in the profession is a fact worthy of note.

The late Dr. Marshall Hall said: "The smoker cannot escape the poison of tobacco. It gets into his blood, travels the whole round of his system, interferes with the heart's action and the general circulation and affects every organ and fibre of the frame."

Said Dr. Willard Parker: "It is now many years since my attention was called to the insidious but positively destructive effects of tobacco on the human system. I have seen a great deal of its influence upon those who use it and work in it. Cigar and snuff manufacturers have come under my care in hospital and private practice, and such persons cannot recover soon and in a healthy manner from cases of injury or fever. They are more apt to die in epidemics and more prone to apoplexy and paralysis. The same is true also of those who smoke or chew much.

With such an array of facts to guide us it certainly becomes the duty of Boards of Health and medical societies to warn the people against the use of everything that injuriously affects the general health and enlarges the mortuary tables. As it has so far been impossible for Boards of Health to effectually wipe out all infectious and destructive diseases through sanitary regulations and quarantine, then while not neglecting these, would it not be well to see what can be done by instructing the people in the importance of true hygienic living in every respect; and then by living true to our teaching we become object lessons that the people cannot help but see and heed. And it certainly is the duty of every physician to so live that he will be a light and a guide to the community in which he lives; that others, seeing the good results that flow from the observance of true hygienic laws, will be constrained to follow in the same course of life. The general adoption of such a course will not only help to stamp out contagious and infectious diseases, but will reduce to a minimum all forms of diseased action.

SANITARY SEWERS.

BY DR. W. J. CARTER.

No more important subject than sanitary sewers could engage the attention of health officers and sanitary scientists. It is with pleasure, therefore, that I accede to the request of one of your members to prepare a short paper on this important subject. I regret, however, that only a few hours are at my disposal to devote to the work and the task must necessarily be incomplete. If I shall succeed in saying enough to quicken interest and cause your honorable body to exert its powerful influence on the side of sewer reform, I shall feel amply repaid.

The question of sewers is as old as history. We note the crystal streams flowing in open sewers through the old town of Damascus, and the huge conduits of ancient Rome, so large that the Emperor could drive his chariots through them. And so in nearly all ancient cities some kind of a sewer system was found. These old sewers were faulty in construction and very unsanitary. The size was often out of all proportion to the amount of sewage and storm water; no adequate system of ventilation, and in shape the worst possible. The bottom of the sewers were flat and the sides walled up with rough stones. This construction favored the adherence of silt, decayed slimy masses and consequent generation of foul odors during the warm months when there was little water.

It is true that at this time sewers were used for storm water and drainage only, but a large amount of garbage and animal dejecta would be conveyed with the surface water into the sewers. We have not time to trace the gradual changes in the shape of sewers suggested by experience, but to note that the flat-bottomed, rough-walled square sewers gave way to round, smooth-walled, and these in turn are now superseded by the oval. The ideal shape appears to be like an egg, with the little end down and with smooth walls. You will readily see that adherence to the walls is reduced to the minimum and a small quantity of water will force forward the garbage.

Prior to the present century it was illegal to drain fecal matter into sewers, and that relic of the uncivilized days, the privy vault, which I regret to say still lingers in some of our cities, was the only mode of caring for human dejecta.

"It was illegal," says Baldwin Latham, "to drain fecal matter into the London sewers prior to 1815, and only in 1847 was such drainage made compulsory."

It is only during the past twenty-five to thirty years that the custom of thus disposing of fecal matter became prevalent. The defects in the old system were quickly apparent in the horrible stench and increased amount of sickness. This led to great improvements in the construction of sewers, with the result of abating the dangers to a certain extent, but they were not removed entirely and can not be under any combined system which conveys together both storm water and sewage.

Let us pause and inquire briefly why this is so. A sewer which admits storm water with fecal matter is necessarily large, and in the hot, dry months the sewage and fecal matter from our vaults remain and fill the sewers with foul odors and poisonous gases. If these gases could be confined to the sewer or even discharged at the mouth, the evil would not be great. But is it thus confined? Let us see. Through the manholes there is a constant escape. But this is not the worst, for it finds its way into our homes in spite of any device ever invented. On this point allow me to quote briefly from the able work of Edward S. Philbrick, of New York, a civil engineer, on "Sanitary Engineering." He says: "Very few of our houses have traps outside their walls in their main drains, and even where they have, this gas has the power of passing slowly through the trap water by absorption, to be given off again on the other side whenever it accumulates to such an extent as to largely replace the common air in the sewer or drain. The insidious nature of such an enemy is one of its worst characteristics, for it acts by invisible agencies. The worst of these gases can hardly be detected by the sense of smell. No system of traps, even if employing all the patents now on record, would suffice to stop it.

"Its inadequacy is seen when we consider that the gases from the sewer are most apt to invade houses during a heavy rain. The influx of this large volume of water must of course replace an equal bulk of gas, for it can not absorb it without a good deal of time, and

then only to a limited extent. What is most to be dreaded in this way is contagion from diseased discharges, being liable to contaminate with disease whole districts, and polluting the homes of the most cleanly with emanations of the vilest sort."

The question may here arise, are sewer gases poisonous? This has been a matter of warm discussion for many years. It may well be doubted if there is such a thing as sewer gas, that is to say a gas peculiar to sewers. I think also that it has been successfully shown that the odors and gases from a sewer are not especially unhealthy.

That sickness arises when there is escape of sewer gas is also clearly proved. If the gases are harmless, then where does the evil come in? These gases are believed to be carriers of poisonous bacteria, with which the large combined sewers are loaded. On this point allow me to quote from James T. Gardiner, director of the New York State Survey and member of the State Board of Health. He says: "The whole tendency of modern investigation is to show that the zymotic diseases are produced by bacteria, whose germs are developed under favorable conditions. It is well known that the most favorable conditions for the growth of these low organisms are heat, moisture, darkness and the presence of ammonia. The damp walls of sewers present, therefore, all the requirements for a most flourishing growth of bacteria, whose germs may float off on the sewer air and be carried into the dwellings by mechanical action, as dust is borne on any air current. The fatal power over life lies, probably, in the little plant-seed, odorless and invisible, floating upon the sewer-air. Large sewers are, then, plantations for the propagation of deadly organisms, the moist, porous walls forming most favorable soil, the ammonia of sewage supplying the manure essential to development, and the warm damp air stimulating to the utmost all processes of growth. Every device of engineering has been exhausted to keep large sewers clean and well ventilated, but the air from them is still deadly. Experience, therefore, teaches that there are some radical defects in the system of large or combined sewers. In view of these facts I am forced to conclude that, from a sanitary point of view, the combined system of sewerage is a failure." Thus speaks one of the most eminent of sanitary engineers.

This view is confirmed by the most advanced thinkers and sanitary scientists of the present day. The old combined system hav-

ing, according to high authority, proved a failure, what does science offer as a substitute? In the opinion of the author, the ideal sewer, from a sanitary standpoint, is what is known as the separate or double system, in other words, one system for storm water and another for sewage. The advantage of a separate system for sewage is apparent from a brief description. To Col. Waring, sanitary engineer of New York, is due the credit of first devising and putting into practical operation the sanitary system. This was done in Memphis in 1881. The experiment proved so satisfactory that four years later the system was extended to more than double its original size, and since that time the system has been extended to more than one hundred American cities, and where properly constructed has given universal satisfaction. With slight modifications here and there, the Memphis system has been closely followed in other cities, so a brief description of one sewer will convey an adequate idea of the whole. The main trunk line sewer of Memphis started at the confluence of a number of six-inch sewers, with a diameter of twelve inches, gradually increasing in size to fifteen, and at the outlet to twenty inches. Into this main sewer is poured the sewage of thirty miles of side lines, varying from six to eight inches in diameter, and traversing nearly every street in Memphis, and accommodating every home. At the end of every branch line is an automatic flushing tank, which is discharged every twenty-four hours. As the population has greatly increased and the side lines been greatly extended since the construction of the main line there are times, says Col. Waring, when the main line has been inadequate, especially in cold weather, when the faucets are left open to protect pipes from freezing. This difficulty has since been overcome by constructing a twenty-four-inch outlet into the river.

The size of pipes used in Memphis have been closely followed by all other cities adopting this system. Many cities, however, have nothing less than eight-inch pipes, as six-inch are more likely to clog up. Few trunk line in any of the cities exceed eighteen to twenty inches. Only where water is abundant and population close, as in Philadelphia, is a larger sewer required.

The advantages are apparent to the most casual observer, that with a system of small pipes with automatic flushing tanks, discharging every twenty-four hours and removing the garbage before there is much decay, and bacteria that may have found lodgment

are completely removed and all gases, if any, forced out by the water which fills the pipes from top to bottom. The combined testimony of those in charge of school buildings and hospitals, as well as private dwellings where this system is in vogue, is that no bad odors are observed. The introduction of gases into dwellings and public buildings is believed to be the cause of much sickness, and many epidemics have been clearly traced to this cause. It is believed that the dejecta from one typhoid, diphtheria or other contagious disease may under certain conditions infect a whole city.

Speaking of small sanitary sewers, James T. Gardiner, of New York, above quoted, says: "The sewers being so small and so well filled by the flow of sewage there is very little exposed wall surface on which bacteria can germinate and very little space for storing up germ-laden air. The gases and heat of decomposition, which so powerfully stimulate the growth of organic life, are prevented by thorough daily flushing, which is only possible in small sewers. The smooth glazed surface of pipes is unfavorable soil for vegetable growth compared with porous bricks moistened with sewage. When the separate system, with flush tanks, is in operation, I can learn of no complaints of sewer gas." Mr. Gardiner concludes as follows: "I am of the opinion that the separate system of small sewers avoids in great measure the inherent sanitary difficulties of the combined plan, and it is an efficient and economical method of removing the sewage of towns. I therefore recommend the State Board of Health to advise the adoption of the separate system of sewerage in those towns which have asked for information on the subject."

The State Board of Health advised as follows: "That the separate system of sewers, with flushing tanks, is hereby recommended for general use in this (New York) State." Facts and testimony confirming these views can be piled up "ad infinitum."

The separate system for sewage with small pipes, connected with automatic flushing tanks whereby garbage and dejecta are removed every twenty-four hours, is the latest development in the evolution of sewers and is of incalculable benefit in the prophylaxis of zymotic and contagious diseases.

The health and happiness of the people are so much involved in this question that literature upon this subject should be freely given to the people. The limits of this paper forbid statistics showing the

lessened amount of disease and death in cities adopting proper sanitary sewerage. Memphis, however, is a fair sample of the whole where the death rate has been lessened 20 per cent.

Dr. Hurty—In traveling in the gas belt and going to farmers' houses where they use gas profusely, I have heard them in three or four instances complain about dryness in the throat, and in one instance attributed diphtheria to gas.

Dr. Wall—I have used natural gas ten years, and regard it as a very great luxury. Like all other luxuries and all other good things, if abused in its use I think it is very harmful. If used properly no harm need result from it. It is the use of natural gas as an illuminator that produces the most harmful results. I have never used it in my house as an illuminator, and never would. If we use it in our homes for illuminating it will result in trouble to the eyes. Using it as a fuel, if you have proper drafts, there need but little difficulty arise. A house may be kept perfectly comfortable, and I think there will be but little injury to furniture, carpets and such like. I think the destruction of these things usually comes from illumination. Burning a dozen Jumbo burners takes an immense amount of gas, and I think there is an immense amount of injury done to the eyes in this way, but I think the greatest injury comes from irritation of the mucous membranes. As I said, all the experience I have had in using it in my home has been as a fuel, and we have never had any of these difficulties to contend with. Those who use it for illumination tell me that lace curtains will drop to pieces in two years' time. It is from the abuse, neglect, and perhaps the ignorance that we get our bad results from natural gas.

Dr. Lytle—The abuse of it is where the trouble comes in. The residents of our place use the gas both as an illuminator and for heating in various ways, in stoves and furnaces, and there is no particular trouble except where they use it for illumination. The worst effects I have seen from abusive use of natural gas is in factories. We have factories where three or four hundred men are working, and they will undertake to heat that whole factory with flambeaux that are kept burning day and night. I have gone to these factories and have insisted upon the manager's putting in other concerns to heat the factory. But they use it in that way,

and the workmen complain about it. The great trouble in the use of natural gas is in using it as an illuminator and in houses where the burnt gas can not be carried off. It affects the throat and the eyes in this way.

Dr. Wall—I wish to say that since the Millspaugh burner has been in use there is but little trouble, because this burner consumes it so much better. I have never been able to detect any of the fumes which come from other burners, and which ought not under any circumstances to be tolerated. No natural gas ought to be used without a flue. I have seen stoves set in a room without any pipe. I have seen that done in shops very frequently.

FORMALDEHYDE.

BY DR. HURTY.

Formaldehyde is undoubtedly the ideal antiseptic, germicide and disinfectant. It meets nearly all the requirements. Formaldehyde is a gas. It is dissolved in water and sent to us in a 40 per cent. solution, just as ammonia gas is dissolved in water and sent to us as aqua ammonia.

Formaldehyde gas is made from wood alcohol. Its history has been set forth in so many articles that I need not dwell upon it here. An aldehyde is intermediate between an alcohol and an acid. If you take ethyl alcohol and dehydrogenate it you will have acetic aldehyde. The question is, how can we get formaldehyde cheaply and perfectly? How can we get it conveniently? I think we have before us an apparatus, invented in this city that is superior to all other apparatuses that have been invented for this purpose. The Robinson lamp I had hoped to be able to exhibit to you. The first one was made out of an ordinary German student lamp. Recent investigations have shown that one of the troubles of that lamp is that it returns to the atmosphere a good deal of wood alcohol. The wood alcohol itself does not exercise the power that is attributed to formaldehyde. This lamp does the same; that is, it turns some wood alcohol loose into the room, but not a great deal. As for its construction, it is about like an ordinary alcohol lamp. Just a

chamber below, a tube leading up here, a wick and the ordinary alcohol burner. The top portion is constructed to throw the products of the combustion back onto the flame again.

We can effect perfect disinfection with this four-light burner. It would disinfect this room in about ten hours, and destroy positively every bit of infection, even if it were full of smallpox or diphtheria infection, in twenty hours. Now, such a simple apparatus can not get out of order; it is effective, it transforms the alcohol into formaldehyde, it does it rapidly, it gives the maximum amount of formaldehyde gas.

Professor Burrage has tried such experiments as this: Disinfection of ordinary dusty books placed in metal sterilizing case and one removed every fifteen minutes and dust planted in tubes. After fifteen minutes exposure two cultures showed growth after four days. The same result was found in four days after exposure to gas of thirty-five minutes. After forty-five minutes two cultures showed growth in four days, and the same result was found after an exposure of sixty minutes, but after seventy-five minutes' exposure no growths, after an exposure of 104 minutes two cultures showed growth after four days. This experiment was adverse. The gas here generated was not sufficient to kill the spores in dust, as the sterilizing case was opened to remove the book every fifteen minutes. These dust spores are unusually persistent, and it was on the spores, not on the bacillus or the organism itself, the experiment failed. The result of this experiment would indicate that 120 minutes exposure to the gas in the sterilizing case would kill even the spores existing in the dust of books.

To get good results in disinfecting rooms you must confine the gas within the room. Experimenters have taken cultures of diphtheria and of cholera, also of other kinds like the pus organism, and put them on cover slides and slipped these inside glazed envelopes and then wrapped them in blankets and comforters, put them with the mattresses and pillows turned over them, and then submitted them to five or seven hours of soaking in gas in the room, the room being filled full of the gas and kept that way, and these cultures at the end of seven hours are destroyed. The inference is that if a room has been occupied by a patient with diphtheria, and he has gotten well, died or been removed, and you want to disinfect

that room, it is not necessary to remove any article at all. Put the blankets and comforters over chairs, set the mattresses on end, let the carpets and curtains remain as they are, and seal the room up as tightly as you can, start one of these four-burner lamps to burning, and with half a gallon of alcohol to 3,000 feet of cubic space you will have satisfactory disinfection in six hours. With 6,000 feet you must extend the time to ten hours, while if you burn this amount of alcohol in three times the cubic space you must extend the time to fifteen hours, and then you can be absolutely certain. Formaldehyde gas does not affect fabrics in the slightest; it does not destroy colors in the most delicate fabrics, or injure furniture or carpets in the slightest degree. We have submitted pieces of lace curtain to this gas day after day without making them tender. We have also submitted linen and silk and other fabrics, and it does not seem to affect them in the slightest degree. It can be said confidently that in disinfecting a room you need not remove anything. The garments that the patient has worn, the bed clothes, the furniture, everything can remain. The day of burning sulphur has passed; it does not do formaldehyde work at all; it only effects superficial disinfection.

In the city of Richmond Dr. Davis has given this lamp a crucial test and has adopted it. The city of Indianapolis, after a most crucial test, has adopted it and has purchased a number of the lamps for public use. The city of St. Louis has adopted it as their official method. New Salem, Mass., and a number of other cities, the Boards of Health of Cleveland, Boston and other cities are making experiments, and I really believe Indianapolis will have the honor of having produced the best apparatus for this purpose that is extant, and I commend it to you.

I have taken formaldehyde in distilled water, I have taken a dram a day of one per cent. solution for several days without feeling the least harm from it. I did that for several days in succession, and had no more feeling than if I had taken clear water, and, indeed, thought I felt a slight benefit from it. I think it would be perfectly proper for dairymen to put one drop in a quart of milk, and then the changes that take place in milk would be prevented. It has been shown that the deterioration of milk from the time of leaving the dairy to the time it is delivered in the city is ten per cent. as a

food product, and that this is due to the microscopic organisms. Now suppose you prevent that by a harmless chemical, you have enhanced the food value of milk ten per cent.

Dr. Hibbard—Is there any estimate, positive or approximate, to show what percentage of this gasey product must be in the atmosphere of a room to let it do this service in three or five or ten hours? In other words, take this room, for instance, without anything but just the openings closed, is there any estimate of what percentage of the atmosphere in here must be impregnated to thoroughly disinfect it?

Dr. Hurty—If you put two per cent. of gas here you may know that in ten hours you have complete disinfection. The perfectly safe method to pursue is this: Say that one quart of alcohol is burning in three thousand cubic feet of space, and that room is allowed to be shut up for ten hours, you may go away and know that at the end of ten hours complete disinfection has taken place. The doors and windows must not be opened; you must secure the gas in the room or you can not do the work. By sulphur fumigation it is nascent oxygen that does the work. You put the moisture in the air, and the sulphur does the work. It lets loose the oxygen, and if you don't precede it with water you don't get disinfection. In surgical cases where the abdomen is opened and you want to have a sterilized atmosphere, you can first sterilize the room thoroughly in this way. Formaldehyde forms a union with gelatine. You make a jelly of ordinary gelatine, and before it has formed you put into it formaldehyde and then stir it again to jelly, and it will harden and can be pulverized. Then, if you can put it in the mouth and hold it until it is dissolved, you have the formaldehyde.

Dr. Laughlin—I think it would be the ideal antiseptic in typhoid fever if it can be conducted to the bowels.

Dr. Hurty—The most offensive odors of the sick room will be instantly destroyed by the solution or the gas. If you expose a forty per cent. solution in a soup plate it will give off a very little of its gas, and then undergo a chemical transformation; it gets waxy and solidifies. You can not take the solution and evaporate it in a pan at all; it will get solid and will not give gas off. It is not practical to use it in that form.

Dr. Lytle—To disinfect a house you will have to use it in every room.

Dr. Hurty—Yes; to disinfect the house it will have to be used in every room in the house separately.

Dr. Hibbard—Can you measure the effect produced by the hardening of gelatine?

Dr. Hurty—I don't know; that might be accomplished. You can pulverize it when it is dry. It can be used as a dusting powder. If dusted into a wound it gets moist and keeps it perfectly aseptic.

Conference adjourned until 2 p. m.

AFTERNOON SESSION.

The following resolution was presented by Dr. Wall:

Resolved, That the health officers of the State of Indiana, in convention assembled, return to the faculty of the Medical Department of the University of Indianapolis our sincere and earnest thanks for the instruction and hospitable entertainment given us at their college Tuesday evening, May 11, 1897.

SANITARY CONDITION OF SCHOOL HOUSES.

DISCUSSION.

Dr. Stout—At the time that this Board passed the rules and regulations to adopt certain fixtures to be placed within the school buildings to prevent the spread of contagious and infectious diseases, I had that law published for three weeks in the papers, and ordered the trustees of my county to place fixtures within their school houses. A number of agents called upon me and offered certain fixtures. I selected one that I thought would meet the approval of the State Board of Health and recommended that to my Board of Trustees. At the time I did so the schools were very nearly out, and trustees objected to putting them in on that account and thought it was not worth while to put them in at that time. I cor-

responded with the Secretary of the State Board of Health, and my recollection is that he thought it best to enforce the law; that a law not enforced was of no use, and I settled down to do that and have begun the work in my county. I recommended a fixture that I think is the best that I have seen. Some trustees have bought the fixtures, and the others will do so shortly. The fixtures consist of a water tank that holds eight gallons; it is porcelain lined, with nickel faucets and has a coat of enamel paint on the outside. I devised a bracket to set this tank on, and it catches all the water that overflows, and this runs out through a pipe to the outside. I recommended a lamp-heated sterilizer for a month or two before the school houses have stoves. After they have stoves they can set the sterilizer on the stove.

I think that it is a wise law, and I think that the Secretary should require the trustees and the county commissioners to place them in every school house. I think that every school house should be thoroughly cleansed, and the janitor should thoroughly sterilize pens and pencils, especially those used by the smaller children. I believe it is the duty of the State Board of Health to order that these fixtures be placed in all the schools. It is of little use to have them put in some counties and not in others.

Dr. Hurty—The school authorities in Indianapolis have adopted it completely.

Dr. Stout—I claim it is the duty of the secretaries to promulgate those laws, and let the man who publishes it present his bill to the county commissioners and they must pay it. Therefore I would offer the following:

Resolved, That the secretaries of the County Boards of Health have those laws promulgated, and that they order the fixtures placed within the school buildings.

Dr. Jay—I find that the health officers are willing to have this done, but the commissioners are not. When the publisher presented his bill in our county to the commissioners they refused to pay it, and said he had no right to contract such a bill. After this I will consult them first. I am subject to them, and I do not want to contract any debts which will not be paid. If the county commissioners are not willing to pay it I can not compel them to.

Dr. Stout—The law says that when you are appointed secretary that you are an actuary member of that Board, and that this Board is a part of and subordinate to the State Board of Health, and you are compelled to obey every behest of the State Board of Health. It also says that when they have once appointed you as their secretary they can not set you aside until that year expires. The man you speak of can go to your county commissioners and collect that bill. I would recommend to every secretary to have this printing done, and when the man presents his bill, if the commissioners do not pay it, have him summon them and they will have to pay it. In matters of this kind I obey the State Board of Health, because the County Boards are subordinate to the State. The secretary is the health officer of the county, and can enforce each and every law; of that I am satisfied.

Dr. Griffiths—There is a disposition to go slow in these things in my county, and they said the State Board of Health was using too much red tape; that they were using too many papers, and they thought we could dispense with some of those things.

Dr. Hurty—In regard to the sanitation of school houses. In a majority of cases the school houses of Indiana are in a horrible condition. So far as site is concerned, the building itself, the lighting, heating and ventilating, and the facilities on the outside, the water supply and the closets, are, in the majority of the country school houses, simply disgraceful. The Superintendent of Public Instruction, Mr. Geeting, agrees with this. Children are sent to these schools and compelled to look right into the glaring light day after day. They are poorly heated, one part too hot and another part too cold. They are not clean, they are not ventilated properly, and, in a word, they are—well, while we have a great educational law and have the facilities for putting it into action—they are a disgrace. There are school houses in this State that have no closet facilities for the pupils. I can show you where they are. I have seen them. Then again some of them have no water, and they have to go a quarter of a mile to some farmer's house. The heating, too, is bad. Now, there is a great field there for good work by the Health Officers. If in the course of a year the Health Officer could get over fifty per cent. of his county and visit one-half of his school houses and make his recommendations or condemnations of the

conditions, a great deal of good could be done. The State Board of Health some years ago made a sanitary survey of the State concerning school houses. It sent circulars first to the Health Officers. It got replies to about the extent of thirty per cent. It then sent circulars to the Township Trustees and got reports to about the same extent. They all reported their school houses in good condition. Then they sent the circulars to the County Superintendents; the County Superintendents sent them to the teachers, and they got replies from the teachers, and then they got the truth. From the teachers they received eighty per cent. of replies. The result was as set forth in the records at the health office, and a very horrible state of affairs it was. There is a great field here for us to work in. We should undoubtedly make a second survey of the State through the teachers in the same way. The teachers will send the plan of their school house. I think in the coming year that each officer here should visit a few of the schools in his vicinity, and if he betters only one of them he will do a good work.

Dr. Henderson—In our school buildings in Covington we have changed things considerably. We have light at the side and back, and have water works in the building, and they are in a better condition than they were before, but still there is room for improvement. As Dr. Stout's resolution has not been seconded, I will second it.

Dr. Wilson—I am surprised to hear Dr. Hurty say that there are school buildings in this State that are not supplied with closet facilities. I believe we can do more good in looking after the sanitary conditions in regard to having the school houses cleaned up thoroughly in the early fall and then kept clean, and by being careful and watching that the water supply of the schools and the heating and light are properly arranged.

Dr. Stout—I firmly believe that every well that is in a school yard in this county ought to be filled up.

Dr. Henderson—There is a well in a school yard in our county and the water had not been used since the closing of school in the spring to the opening of school in the fall. They used that water in the fall and we had forty-three cases of typhoid fever. I know

of another case where they had twenty or thirty cases of typhoid fever, some of them fatal, from drinking water from a well in the school yard.

Dr. Stout's resolution was adopted by the Conference.

SHOULD THE CARE OF THE HEALTH OF LIVE STOCK BE IMPOSED UPON THE HEALTH BOARDS, OR SHOULD IT REST WITH A SPECIAL COMMISSION?

DISCUSSION.

Dr. Hurty—The present sanitary live stock law says that if anyone knows of any infectious or contagious disease among animals he shall immediately report it to the County Health Officer. The County Health Officer shall take charge of the case and communicate directly with the Sanitary Live Stock Commission. There is an appropriation of \$4,000 for the expenses of this Commission. County health officers take charge of the animal until the Commission can handle it. Suppose it was a bad case of glanders. You have no power to summon a jury and destroy that animal and let that jury award the proper compensation for it. That power belongs to the Sanitary Live Stock Commission. But in the meantime you must inform them, and you can quarantine the animal. In my judgment it would be an advantage if the Health Officer could take charge of the case and impanel a jury of three and award damages for it; the case could be disposed of in a few hours where now it takes two or three days. That would bring you better compensation, and give you more power and better standing with the Commissioners, who are nearly all farmers. I have thought that if ever a new law was passed in this State—in fact, the ideal law I spoke of yesterday had that feature in it—the Health Officers should be properly compensated and then they would do the work. It seems to me that it would add to the Health Officer's influence with the farmer commissioners, and certainly to the amount of money allowed for his services, if he had the care of the animals as well as the care of the human family, to have them all under one bureau. The relation of

the health of animals with that of the human family is very close; you can not separate them. The two bureaus should be in one.

Dr. Hibbard—I move that it is the sense of this Conference that the health of the live stock should be attended to by the Health Boards, and that the sanitary conditions of live stock in the State should be under the supervision of the State Board of Health.

Motion seconded and carried.

SHALL MEASLES BE QUARANTINED?

DISCUSSION.

Dr. Henderson—We had an epidemic of measles in our town; there were 150 cases, and I flagged the houses. I knew, of course, that the people run into measles and get them on purpose, but we have had some cases that were fatal. About ten days ago we had a death in the south part of the city. I required our Superintendent of Public Schools to find out all who had been exposed to measles and to keep them out of school until ten days after the last exposure, and then they had to come to me to get permission to attend school again.

Dr. Lytle—I had an epidemic of it in our city. At one time there were 500 children out of school and not less than 1,000 affected with the measles. I have not put up a flag or carded a house, and never expect to. If we could educate the people to keep their children closely at home when they are breaking out with the measles it might keep back the epidemic.

Dr. Hurty—Then you are opposed to the quarantining of measles?

Dr. Lytle—Yes, sir.

Dr. Stout—The doctor said the thing to do was to educate the people. I think the best way to educate is by quarantining. The laws of the State Board of Health are that we quarantine against measles, and while it might seem that it is of very little importance,

I believe it is of just as much importance to quarantine against measles as against other infectious or contagious diseases. If we disobey in this case we might just as well disobey in the rule to quarantine against any other disease. We had a case of diphtheria, and could not get the father of the child to stay in the house, and I was sent for and told him that if he did not stay in the house I would have him locked up.

Dr. Lytle—I think it is better for children to have the diseases that are peculiar to childhood, and let us do the best we can for them, and not let them go and be liable to get it when their children get it, and then the parents die with it.

Dr. Stout—That is a disease of children, and so is diphtheria and scarlet fever, and if you quarantine against these, you ought to quarantine against measles.

Dr. Wall—If the law of the State of Indiana required quarantining against measles, I should be in favor of the next Legislature repealing that part of the law. Every time measles come into the neighborhood you see mothers that have passed from childhood to maturity and have families of their own that have not had the measles, and they regret it. They wish they had had them when they were children. I can see that children suffer very much less with measles than grown people. The child that has measles between the ages of one and fifteen years, if the child is healthy and has its mother's care, is not apt to be dangerously sick. I believe it is worse than folly to quarantine against measles. Let the children have the measles, and the sooner the better.

Dr. Henderson—A grown person doesn't want to have the measles. Don't make laws that we can't enforce without getting the opposition of the people too much. I am opposed to making any unnecessary quarantine.

Dr. Hurty—We believe that scarlet fever deaths reports are nearly correct. We get them more perfectly than other diseases. There were 437 deaths reported from scarlet fever and 318 from measles last year. Now, what are the probabilities? The probabili-

ties are that we get more nearly perfect reports of scarlet fever than we do of measles, and I assume upon that probability that we have an equal number, and perhaps a few more, deaths from measles than from scarlet fever.

Dr. Wall—Admitting, as everyone will have to admit, that the mortality among children is less than the mortality among adults, by preventing children from getting the measles, the inference is that more adults will die when they get them. The greatest good to the greatest number will be to let children have measles while they are at home with their mothers.

Dr. Laughlin, Chairman—Let all who are opposed to quarantine say aye, and those who are not opposed say no. The ayes have it.

Dr. Jay—It is my opinion that the doctors will never report all the cases of deaths, and the thing for the health officers to do is to begin a crusade now in the Legislature of the State to compel the undertakers to get a burial permit from the health officer upon the presentation of a certificate of death from the attending physician. In my town, of course, the undertaker resides in the town where the doctor that usually treats the patient lives. Now, it is a matter of pride with the undertaker to do this business, and he will take a pride in it, just as doctors take a pride in making reports of births. It may be a case of consumption, and the doctor may not have seen the patient for some time, and he would have to make a special trip into the country to get the data, and that the doctors won't do. If when the undertaker, who is the last man on the scene, will come to the health officer and get a burial permit, they will hunt you up immediately. If you require the undertaker to get a burial permit, and he goes to the physician to get the data, you will have a complete, accurate and valuable return. As it is now, the statistics are valueless. You can have the same authority that you can to compel other reports to be made. Why is it that doctors report births and not deaths?

Dr. Hibbard—Because they want to exploit themselves.

Dr. Wall—Would not the undertaker want the same thing in making the returns of deaths?

Dr. MacCoy, Columbus—The duties of the health officer of the county are numerous and some of them arduous. It is impossible to do all of the work that is to be done for the fees allowed. You prosecute a doctor, and he becomes spiteful, and if he finds you derelict he will work some way to bring charges against you. That is one thing that will make health officers timid about making these reports. He does not do his duty fully himself. I live in one of the smallest counties of the State. It has only five townships; it would take 15 days to make the inspection required. Our commissioners will not allow for any extra services, and so, if anything of a grave nature would come up, I could not see to this work. I feel it is the proper thing to do to make this inspection, but I cannot do it. When a health officer gets to thinking of these matters it will deter him from prosecuting those obstinate physicians.

Dr. Hibbard—Don't you feel that you are liable for prosecution for not making this inspection properly?

Dr. MacCoy—Hardly.

Dr. Hibbard—Is it not the duty of the health officer of the county?

Dr. MacCoy—Yes, sir.

Dr. Hibbard—If you cannot do it and feel that you have an enemy there, resign and have him elected, and then see if he will make the inspection.

Dr. Wilson—Dr. Wall speaks of this matter being brought before the Legislature to get the help of the undertakers. That will be two years off, and the Secretary of the State Board of Health, and the President as well, maintain that we have a law at the present time that can be enforced compelling physicians to make these reports. It is not a matter of courtesy on their part, but the law says that we shall keep the records of all the births and deaths. Now, it is a matter of importance. I had one man come to me last year asking for a death certificate of a woman who died out east of the city, and who was from Germany, and there was quite an estate being settled up. She had been dead several years, and they re-

quired a certified copy of the certificate, and it happened that that death had been reported, and it was no trouble to make out a certificate. We had recently a case at Irvington on which a pension case was depending, and there was nothing in the way to establish a claim except the births of the children, and they came to us for a record. There was no record of them, and that put a stop to the claim for a time. I do not know what they have done since.

If we have a law that will help us to get these reports, it might be well to settle on some method of doing it, and let the State Board of Health back us up in it. And if the higher courts decide we have a right, let the decision be distributed and let the law be enforced. I think that if there is a law and it can be enforced, the State Board of Health ought to take the initiative. I don't think the present law sets the time when these reports shall be sent in. Is there any time set when a doctor shall report a birth or a death?

Dr. Hibbard—Five days.

Dr. Hurty—The law requires that all marriages shall be reported in five days by the Clerk to the Secretary of the State Board of Health. The activity of the State Board of Health is going to continue, and those health officers who don't want to do the work, may resign. The State Board of Health will continue to enforce the laws to the utmost; then if enforcement is onerous in any way, let the law be abolished. If, on the contrary, we find that good comes of it, we will want more laws of like kind.

Dr. Wilson—Does not the law say that the State Board of Health shall have charge of the statistics?

Dr. Hurty—It does; and the general health of the people; and charges the State Board of Health to collect these statistics.

Dr. Wilson—If we send out a circular letter it is necessary to designate some time. You have designated 20 days as the time in which we have to get our reports to you. Now, can we say that in five or ten days, if you don't have your reports of births and deaths to us, we will prosecute you?

Dr. Hurty—The law says vital statistics shall be collected, and leaves it to the Health Department to make the rules for collecting

them. We must have reports from county officers. The county officers can put it five or ten or fifteen days from other physicians. This is made as a police order. The boards of health of the counties, the commissioners with their officers, are really police, and this is a police provision.

I have the manuscript about half prepared for a book of instructions to all health officers. Steps were taken at our very first meeting to codify all the rules and comply with the conditions we must meet.

Dr. Hibbard—When you get that all fixed in that way, plain, open and palpable, so that there will be no misunderstanding, then make it your duty to prosecute every officer that will not carry them out.

Dr. Hurty—So far as our strength will permit. Our strength is only \$4,000, and that will not carry us far.

Adjourned sine die.

ANNUAL REPORTS
OF
COUNTY HEALTH OFFICERS
FOR THE
YEAR ENDING SEPTEMBER 30, 1897.

ANNUAL REPORTS OF COUNTY HEALTH OFFICERS.

ADAMS COUNTY.

In reply to your letter of October 20th I wish to say that the health of the people of Adams County for the year ending September 30, 1897, has been fairly good.

We have had several cases of typhoid fever, with more than the ordinary number of fatalities attending them, due, I think, both to the carelessness of the attending physicians and also to the fact that the people would not in some cases follow the instructions of the physicians.

There has also been quite a number of cases of diphtheria in the county during the year.

The sanitary condition of the poor house, court house and jail is good.

The sanitary condition of the schools of Adams County is good with the exception of two or three, and think we can improve their condition.

We have quite a number of cases of phthisis in Adams County, of a catarrhal form, due, I think, to the humidity of the atmosphere.

Respectfully,

H. F. COSTELLO, M. D.,

Secretary Adams County Board of Health.

Decatur, Ind., November 11, 1897.

ALLEN COUNTY.

The health of our county during the last year was good. An outbreak of typhoid fever in Baldwin was, after investigation and the sending of a sanitary officer, promptly checked. Also an outbreak of typhoid fever in Adams township was similarly treated and an epidemic averted.

The health of the city was also good. Diphtheria, measles, scarlet fever are with us endemic, and by proper quarantine the diseases in question did not get the better of us. The city employs three sanitary officers, and I have one at my disposal.

Otherwise there is nothing to report.

Yours respectfully,

DR. CARL PROEGLER.

Fort Wayne, Ind., December 30, 1897.

BARTHOLOMEW COUNTY.

There is nothing in the sanitary history of Bartholomew County for the year ending September 31, 1897, of special interest, except as it may relate to the continued prevalence of typhoid fever and diphtheria.

The first quarter of the year ending September 31st, 1897, represents the last quarter of the year 1896. This quarter gave us 197 cases of diphtheria, with 27 deaths. There are 260 cases of diphtheria on record

for the full year, with 33 deaths. Typhoid fever has prevailed to an alarming extent during the latter part of the year, especially in the neighborhoods of Burnsville and Elizabethtown.

So far as our sanitary survey has gone, the prevalence of typhoid fever in these localities has been caused by the use of water from polluted wells, and discloses the fact that deep wells drilled and cased are not above suspicion. With the above exceptions, the general health of the county during the year has been fairly good, although showing more evidences of malarial influence than for many years.

The condition of the Bartholomew County poor asylum is set forth in my report to the Board of County Commissioners at their September meeting, a copy of which I enclose.

The county jail is kept in fairly good condition.

The management of the Frances Comfort Thomas Orphans' Home of Bartholomew County cannot be excelled if equaled in the State.

The whole number of deaths for the year is 270. Of these 15 were from typhoid fever, 36 from phthisis, 15 from meningitis, 33 from diphtheria, 18 from pneumonia. The rest are from various causes, not exceeding two each.

Finally, the records of typhoid fever are so imperfect and unreliable that the number reported is not worthy of mention. Almost all fevers that continue over ten or fifteen days are called typhoid, and many times are not reported at all, unless a fatal termination is anticipated.

S. M. VORIS,

Secretary Board of Health, Bartholomew County.

REPORT OF BARTHOLOMEW BOARD OF HEALTH.

To the Honorable Board of County Commissioners and ex-Officio Board of Health for Bartholomew County:

Gentlemen—As it devolves upon me, by virtue of my office as Secretary of the County Board of Health, to make a sanitary survey of the county institutions and buildings at least once a year and report the same to this board, I, for special reasons select this occasion for making my annual report of the condition of the Bartholomew County alms house. In accordance with the rules governing the office, I made a critical inspection of the alms house, Saturday, September 11th, 1897, and found the sanitary condition in every department of the institution fully as good as could reasonably be expected under the existing conditions and with the facilities furnished the management. The building, although erected many years since, is still a substantial and very creditable one, but utterly devoid of all the modern facilities and conveniences with which similar institutions of more recent construction are ordinarily equipped. All of the water used in the building has to be carried from the backyard up from one to three flights of stairs. All hot water used for scrubbing floors and cleansing of wood work must be heated in kettles in the backyard and carried in tubs or buckets up these same stairways from first to third floor. If it is ever necessary to give an inmate a bath—which is liable to happen some time on purely sanitary grounds—the water must be heated, carried up the stairways and the bath given in anything from a washpan to a washtub.

The excrement of the sick who are unable to leave their rooms is caught in open wooden buckets, and in case of dysentery and kindred diseases, where the evacuations are very frequent, they must necessarily stand in these open vessels for some time before they are removed, and then must be carried through the main halls and stairways to be emptied into the vaults in the backyard. While there seems to be plenty provided in the way of provisions, the most essential thing in the preparation of the food is in one general principle, most execrable. The cooking is necessarily done by the inmates. The chief cook at the present time is practically if not almost entirely blind physically, and very little if any better mentally. The second or assistant cook ranks consistently with the first.

The mental condition of nine-tenths of these people is such that they cannot be trusted or depended on unless they are constantly watched, and it is a physical impossibility for any one person to watch what is going on in different parts of the establishment when the disposition is to forget or neglect as soon as they are left alone. The water for laundry purposes has to be heated in kettles in the backyard, summer and winter, the washing done out of doors in the summer time and the water carried down in the basement in winter.

Further the walls of the building are in bad sanitary condition from garret to cellar, and the floor of the basement must be changed before anything like a good sanitary condition can be maintained.

In view of these facts so briefly mentioned I would recommend to this Honorable Board the following improvements:

First. Provide plenty of good water, and by the best practical modern system force it to every floor in the building. Put in a "bath room" in each side of the establishment.

Second. Repair and paint all of the walls of the building. Put a new brick or cement floor in the basement, and fit up one or two of the rooms with cement floor and proper drainage for a "laundry."

Third. Supply closed "slopjars" for the rooms to be used in cases of sickness. And as soon as practical throw aside the wooden bedsteads, which serve as nests for vermin and infection, and replace them with iron bedsteads.

Fourth. Supply a practical and reliable cook; and besides furnishing the inmates with wholesome and properly cooked food, I believe they will save enough in provisions to pay the extra expense of wages. It is a physical impossibility for one woman to look after the sewing for all the inmates, see that the chamber work is done by such inefficient and unreliable help, look after the sick and at the same time have even anything like a practical knowledge of what is going on in the kitchen and dining room unless she has some one there upon whom she can depend to carry out her orders.

Lastly. It is no crime to be brought to such a depth of misfortune, neither is it always an evidence of improvidence. Sometimes people of ordinary culture and refinement together with the keenest sensibilities are compelled by misfortune and adverse circumstances to seek refuge in the home you have provided for them. People of this character will usually find some way of paying their way even there, and should not be compelled to associate with or be brought in contact with the feeble-minded,

vicious and polluted. In other words the inmates of the home you provide should not be compelled to give up all claims to self-respect and decency.

Finally. Gentlemen, there is but room in the establishment at the present time that would tempt you or me to sit down for a few moments to rest. This room is occupied by an intelligent old lady who has furnished it herself with the remnants of "better days." I believe that the furniture and equipments of this one room would bring more money to-day, if put under the hammer, than all the rest of furniture in the building outside of kitchen.

Respectfully,

S. M. VORIS,
Secretary Bartholomew County Board of Health.

BENTON COUNTY.

In response to your letter of inquiry I beg leave to say that the health in Benton County for the past year, ending September 30th, 1897, has been remarkably good. No epidemics have prevailed and only a very few isolated cases of typhoid fever, scarlet fever and diphtheria have occurred within the county. The per cent. of cases of phthisis will not reach that of the older and more densely populated counties.

The hygienic rules and requirements of the County Health Board are, as promulgated, rather searching and rigid, and it may be said, too, that the Health Officer has the warm support of the people in general, and especially so of the physicians of the county.

Benton County has within the past few years been thoroughly under-drained, and the supply of drinking water is, in the main, absolutely pure. Fowler, the county seat, has recently completed a water works system which furnishes a perfectly pure and wholesome supply of water, and almost every farm in the county has a deeply driven well.

There has been no epidemic of hog cholera. There was during the past winter an outbreak of glanders on a farm one mile north of Earl Park, which affected all the horses on the farm. They were, however, all promptly killed, and by thorough disinfection the disease was stamped out at once.

The sanitary condition of the county poor farm is good. The buildings (the main one a brick structure) are beautifully located upon an elevated site, making the drainage splendid. The water supply is from two deeply driven wells. The buildings are fairly well heated, lighted and ventilated, and its management is first class.

The county court house, a very fine, large structure of brick and stone, is beautifully located in the center of one of the most beautiful blocks of the city and is well ventilated, lighted and heated. Its water supply is derived from the city water works and a deeply driven well within the square.

The county jail and sheriff's residence is constructed of stone and after modern architectural plans. The hygienic conditions are all good, with the exception of the drainage, which is not first-class.

The sanitary conditions of the public schools of the county are all good. The Township Trustees and School Officers are all up-to-date officials, thoroughly awake to a sense of their duty, and take a pride in having their school houses all put in order, the water supply and heat supply in good condition and kept so during the entire term.

Respectfully submitted,

CLARK COOK, M. D.,
Secretary Benton County Board of Health.

BOONE COUNTY.

In reply to yours of October 20th, I am pleased to report that the health of Boone County for the last year has been good. No epidemics of any consequence. Some diphtheria last spring, but it was easily controlled. Also a few scattering cases of scarlet fever. Typhoid gave us but little trouble, considering the low water supply, there being but five deaths and from twenty to twenty-five cases reported.

The poor farm is in good sanitary condition, and while there is an average of forty inmates, very little sickness is reported.

The childrens' home is in fair condition, but some improvement could be made by having larger and better ventilated sleeping apartments.

The jail is in excellent condition. The public vaults are located in the court house and when they are burned out it usually causes great annoyance on account of the horrible stench. I would like to know of some way that it could be managed without being such a nuisance.

I believe the schools opened this year in better condition than ever before. I issued the health order, as the State Board suggested, and got excellent results from it. We have 128 country schools and 58 driven wells. The Township Trustees are responding to my suggestions very readily, and I believe by another year everything in the country schools will be first class from a sanitary point. Almost all the houses were scrubbed and a majority of the closets received attention. I find difficulty in getting them to put up window blinds, but I hope to have that accomplished by another year.

There were seventeen deaths reported from phthisis.

I know of no epidemic of hog cholera this year, while last year our county suffered greater than any in the State.

Yours truly,

J. R. BALL, M. D.,
Secretary Boone County Board of Health.

CARROLL COUNTY.

In answer to your circular letter of October 20, 1897, I hereby hand you the following general report of the conditions of Carroll County, Indiana:

The general health of Carroll County has been exceptionally good the past year. The County Board of Health has taken every precaution to prevent disease of every character, and every suggestion of our efficient Secretary of the State Board of Health, Prof. J. N. Hurty, has been strictly carried out.

The public school buildings of the county have been thoroughly cleansed by our efficient township trustees and all sanitary conditons put in order, and we do not fear any epidemic affecting our schools. Every case of diphtheria reported to this Board has been investigated personally by the Secretary, and if found necessary, the families have been quarantined, and when the disease abated, a thorough fumigation of the premises has followed before the quarantine was raised; this under our immediate direction, and all precautionary measures used to prevent the spread of the disease, and I am happy to say that in no case has this disease been allowed to go beyond the house where found. The source of the disease has almost invariably been traced to bad water, old, decomposing residences and poorly fed and nourished persons. The physicians of Carroll County are well equipped to battle with this dreaded disease. In almost all the cases antitoxine has been used, with the best results, and I must say here that I have had the hearty co-operation of the medical profession of this county in all sanitary undertakings. They, as a rule, are educated, scientific men, always seeking the best interests of the community at large.

There have been some twenty-five (25) cases of typhoid fever reported, and but one death. Almost invariably this disease has been traced to the bad condition of the water supply. Where the water has been condemned by the State Chemist the wells have been filled up and a new supply of water procured. In this matter the people have acted in harmony with the Board of Health.

The meat markets and slaughter houses have been inspected regularly by the Secretary, and all suggestions made by him been complied with. The food supply carried by the merchants has been thoroughly protected from dust and other sources of contagion or contamination of any kind.

The farmers, as a rule, have kept their farms in a neat condition, and decomposing vegetation has been burned. But little complaint of hog cholera has been heard this year, although nearly all farmers have been very careful to use some of the recommended preventatives where large herds of hogs have been fed.

There have been no cases of smallpox in this county, nor any cases of cerebro-spinal meningitis reported. Phthisis has been somewhat prevalent along the Wabash River, but almost invariably the afflicted are past middle life, with a bad family history of this disease.

I want to thank the State Board of Health in general for the many good suggestions to the secretaries of the county boards.

I am sincerely yours,

W. F. SHARRER, M. D.,
Sec'y Carroll County Board of Health.

CASS COUNTY.

In reply to your letter of recent date, I wish to say that the sanitary condition of Cass County for the year 1897 has been fairly good.

The county asylum is in good condition. For our jail I can not say as much, but our County Commissioners will, no doubt, soon build a new jail or place the old one in a better sanitary condition.

The school buildings of the city and county are in very good condition.

well ventilated and lighted. Our township trustees saw that each building was well renovated before the fall term of school commenced. With but few exceptions, our township trustees have complied with the special rules governing schools. Some have not complied with Rule 4, and just what to do I am at a loss to know. Can you suggest a way to handle these obstinate ones?

As to the matter of births and deaths, I wish to say that, while we are receiving more reports, there are quite a number of our physicians who are negligent in this direction. In the past year, up to September 30, 1897, 210 deaths have been reported.

Respectfully yours,

F. A. BUSJAHN, M. D.,

Sec'y Cass County Board of Health.

Logansport, Ind., January 25, 1898.

CLINTON COUNTY.

The sanitary condition of Clinton County was good for the year ending September 30, 1897. There were a few isolated cases of diphtheria, scarlatina, typhoid fever and measles. Such prompt measures were used by quarantine and isolation to suppress and prevent their spread that in no instance have they prevailed in an epidemic form.

The sanitary condition of the county poor asylum and jail has been kept in good condition. The inmates of both have been so well cared for that there was but little sickness.

The sanitary condition of the school houses is so well cared for, and the health of the pupils so good, that no complaints have been made.

The physicians are generally derelict in reporting their contagious diseases, births and deaths, as required by law, making my reports very inefficient.

Respectfully submitted,

G. W. BROWN, M. D.,

Sec'y Clinton County Board of Health.

CRAWFORD COUNTY.

In answer to your letter regarding the sanitary condition of Crawford County, I will say the county buildings, including the county poor asylum, jail and public school buildings, are in good condition in every respect.

The County Superintendent informed me that the schools throughout the county are kept clean, well ventilated and have good drainage.

Being the physician for the county poor asylum and county jail, I have good opportunities for knowing the conditions, and consider them first class. Our county court and jail buildings are new, well ventilated and well kept.

The health of the county is in much better condition than last year. English having just been made the county seat of the county, it has been wonderfully improved during the past year, having put in a splendid

water-works system, supplied by some natural springs which flow from a neighboring hilltop at an elevation of 125 feet, affording an abundance of pure, fresh water. Immediately north of our little city is situated the famous Hazlewood Sulphur Springs, which have attracted considerable attention by their health-giving properties, and our citizens are proud to take advantage of their waters.

Our electric light plant, while not an elaborate concern, is sufficient to light our city.

In the lowlands we have had considerable neuralgia, but the typhoid fever, which for many years has been so prevalent, seems to have become a thing of the past, or nearly so. There were a few cases in our county, but not of that malignant form which formerly existed. I think much of this is due to more attention having been given to the sanitary condition of the county.

Yours, etc.,

GEO. R. HAZLEWOOD,
Sec'y Crawford County Board of Health.

DAVIESS COUNTY.

Diseases of a malarial origin were rather more prevalent during the year ending September 30, 1897, than for several years past. This was doubtless due to the excessive rainfall of last spring. With this exception the health of the people of Daviess County has been unusually good. No serious epidemic has visited the county during the year. A few cases of diphtheria occurred, but the disease manifested little tendency to spread or become epidemic. Typhoid fever was less prevalent than usual. Perhaps an exception to this latter statement should be made as to the eastern part of the county, especially in Barr Township. The physicians of that locality admit that they have treated numerous cases, but they, like other physicians of the county, neglect to report any but fatal cases.

The county poor house is situated about three miles north of the city of Washington, upon one of the finest farms in the county. It is well managed and its sanitary condition is good. The inmates are apparently as comfortable and contented as it is possible to make this class of unfortunates. The sanitary condition of the court house is fairly good.

Owing to its faulty design and construction, the county jail can never be kept in good sanitary condition. It seems to have been built upon some ancient plan devised in the days when prisons were intended for places of torture. Its walls and floors, composed mainly of brick and mortar, absorb freely the moisture from the damp soil upon which it is situated, and at no time, even during the recent protracted drouth, were they free from moisture and mold. The drainage is exceedingly bad and the sewer leading from it is so small that it often becomes choked. When inspected recently it was found that this condition had caused an overflow in the water closets, and around each privy seat several square feet of the floor was covered by a mixture of urine and feces. The terrible stench arising from this filth permeated the entire building. At that time the rooms were crowded with prisoners, among whom were a number of in-

sane persons—some old and feeble—who, owing to the crowded condition of the Evansville Insane Hospital, could not be transferred to that institution. When the attention of the County Commissioners was called to this condition they acted promptly and ordered that a thorough overhauling of the entire building be made. Since then the condition has been much improved, but Davless County will never have a jail what it ought to be, from a sanitary point of view, until another is constructed upon more modern plans. During the last two years there has been an average of six or eight insane persons confined within the loathsome walls, awaiting admission to the State Hospital for the Insane at Evansville, but who, on account of the crowded condition of that institution, could not be received. That the health, both mental and physical, of these unfortunates has suffered serious and in some cases irreparable injury cannot be doubted. It is to be hoped that at some time in the near future some arrangement can be made to obviate the necessity of inflicting this unmerited cruelty upon this helpless class.

A little progress is being made annually toward the sanitary improvement of the schools, but there still exists a great deal of carelessness—not to say ignorance—on the part of those charged with their care and management. One matter which calls loudly for reform is the quality of water supplied for drinking purposes. This is usually, in the case of country schools, "borrowed" from a neighboring well, and is often not only unpalatable, but positively dangerous to health.

The dangers to which school children are thus exposed is well illustrated by School No. —, in Harrison Township. In this instance the water was obtained from the well of a neighboring farmer, who was himself suffering from typhoid fever. The result was what might easily have been foretold. At least five of the pupils were soon prostrated with the disease. The law should hold school officials and teachers criminally and financially liable for such gross carelessness. The plea of ignorance or thoughtlessness should not be accepted as a valid excuse when the health and lives of the pupils are thus imperiled.

The physicians of the county are very negligent about making the reports required of them by law. Births are fairly well reported, but perhaps not above 25 per cent. of deaths are returned to this office. This is easily accounted for, one of the principal causes being the difficulty in obtaining the necessary data for making the reports. It often happens that a death occurs miles away from the physician's office, and none of the members of the family of the deceased are seen for weeks afterwards, and the doctor finds it impossible to obtain the necessary information without making a trip especially for that purpose. As this requires a considerable outlay of time and money, he feels that it is a hardship to do so, and the death is never reported. It is all well enough for sentimentalists to talk about the duty which the physician owes to the State and to mankind, but if one of these sentimental theorists was to be required to make repeated trips of miles over roads of mud knee deep to a horse, through storms and slush, for the sole purpose of obtaining data to enable him to make a report for which he would receive nothing but the doubtful praise of some statistical enthusiast, I surmise that in the future he would at least feel a little sympathy for the country doctor who fails to report promptly every death which occurs among his patients. If correct reports of all

deaths are ever obtained, the law will have to be changed and the reports obtained on an entirely different plan from that now in vogue. The requirements of the present law are so burdensome and unreasonable that no physician doing a general practice in the country will ever comply with them, and I may add that no official who will attempt to strictly enforce the provisions of the law is likely to be found soon, and if found, would probably serve but a single term in office.

Yours very truly,

GEO. W. WILLEFORD, M. D.,
Sec'y Daviess County Board of Health.

DEARBORN COUNTY.

In compliance with the request from your office relative to the sanitary condition of Dearborn County, I herewith make the subjoined report:

The county is situated upon the Ohio and Great Miami rivers, and, except in the alluvial lands, lies well elevated. The surface drainage, taking the entire county into consideration, is excellent, storm water and surface sewage being carried to the above-mentioned rivers by the large creeks—Laughery, North and South Hogan, Wilson and Tanner. These streams are fed by numberless brooks and rivulets, whose carrying capacity varies with the season and amount of rainfall. Except in the river and creek bottoms, which are composed of loam, clays and gravel, the surface and underlying rock are silurian limestone, chiefly of the “Lower period.” These rapidly drained limestone hills and gravel intervaes during the usually occurring summer drouths become excessively scant holders of stored water. Originally well wooded, much of the land has been stripped of its timber and underbrush, causing during the rainy seasons a too rapid carrying off of storm water, thus diminishing the quantity of subterranean water stored, and resulting, in the upland districts especially, in a much-curtailed water supply for household and farming uses during the generally rainless months of late summer and oftentimes early autumn. In the river-border townships this trouble is not experienced, as a never-failing supply of most excellent water (although quite “hard”) may always be obtained by driving or boring to what is known as “the second gravel.” Especially is this true of Lawrenceburg, city and township. Probably no town or city in the State has a more adequate source from which to draw or purer water when obtained, although its excess in lime salts may be a factor in chronic enlargements of the thyroid gland, which are, comparatively speaking, quite frequent, especially in Lawrenceburg township.

I have personally inspected the county court house, county poor farm and buildings and county jail. The schools of the county are spoken of in a report from the Superintendent of County Instruction, which I subjoin to this letter. The graded school building in this, the county seat, I shall speak of separately later, as also that in the neighboring city of Aurora.

The court house is a fine building of Indiana limestone, well situated and surrounded; ventilation good; heating arrangements ample, and as a

whole very well lighted. The building has quite recently been equipped with closets and urinals, provided with an ample supply of flushing water, and the general condition of the building may be classed as excellent. My only comment is the placing of public water tanks, with dippers, in the main hall for the promiscuous and indiscriminate use of the general public, a proceeding I believe to be dangerous. This same objection obtains in Lawrenceburg generally, and some parts of Aurora, in connection with the public pumps, the vicious habit of hanging a cup to the pump for general use; yet it is difficult to point out how this dangerous practice may be obviated.

The jail, since reconstruction, is in as good a general condition, as regards heating, ventilation and closet arrangement, as could be expected, and the entire absence of sickness contracted in the building during the year corroborates this conclusion.

The county poor house and building for the insane is situated about 14 miles from the county seat, in Manchester Township. The farm contains about six hundred (600) acres of fair, rolling land, generally well drained, but poorly watered. It is kept in most admirable condition as regards outbuildings (sheds, stables, barns, etc.), fences and cultivation. The main house, a substantial brick, is well ventilated and lighted. The heating arrangements are not all that could be desired during the severest winter weeks; nor is the drainage of the cellar good, there apparently being a small subterranean spring, the seeping from which keeps some parts of the underground rooms continually wet. The water supply is wholly inadequate during the dry months, for a proper supply of water suitable for drinking and cooking and a sufficient quantity for decent lavatory purposes is not to be had. The County Commissioners should, without doubt, order at least two additional wells dug. The general management of the farm and its pauper tenants, the character of food furnished and provision made for competent medical services when needed is of the best. With regard to the "stone house," the building in which, of necessity, live a few of the most pitiable human beings in the county, while the present Superintendent and his predecessors have done the best possible under the circumstances to make the condition of its inmates decent, yet nothing short of the complete destruction by fire of all this structure other than its outer stone wall will remedy the state of affairs. A new and modern interior finish, proper sub-ventilation, better lighting, some efficient yet safe method of heating, and last, and by no means least, a very ample water supply for bathing occupants and flushing their cells must be provided before the helpless unfortunates can be decently allowed to exist.

The public school building at Aurora, which contains most of the graded rooms, is well situated and is a modern building, fairly well adapted to its purpose. Very little can be said of the building at Lawrenceburg. Old-fashioned, poorly lighted and still more poorly ventilated, it is about as ill arranged and suited to the purpose for which used as may be imagined. The privy system, through no fault of the Superintendent or the School Board, is dangerous both to health and morals. The pernicious habit of the general and indiscriminate use of water-cup drinking prevails. The water is the only good feature in the entire system. Superintendent, teachers and the City School Board have urged, the local Health Board

has attempted to assist by advice and orders; but what was good enough two generations ago seems to satisfy, and any move toward a betterment is met with an injunction or threatened suit. And so the affair stands—privy and all.

The general health of the county for the year has been good. No epidemic of any kind has occurred. There have been a few scattered cases of typhoid fever, usually traced to improper water supply, mostly in the country. When occurring in the larger towns it has in most cases been imported from points outside the county limits. Since January 1, 1896, 11 cases have been reported. Scarlet fever has not been reported. There have been no cases of smallpox or cerebro-spinal fever. But six reports of diphtheria have been sent to my office, and of these three have been designated as "membranous croup." Antitoxine has been but little used, and with results not so comforting as reported elsewhere. I am of the opinion that the majority of cases in which this remedy has been used it was tried when the patients were practically moribund. There has been no epidemic of sickness among domestic animals. Phthisis is the most common cause of death, my returns showing an average of 14 from this cause in a total of every 100 deaths.

I subjoin the concise report of County Superintendent Gold relative to school matters in the sanitary way in this county.

I am, sir,

S. H. COLLINS, M. D.,

Sec'y Dearborn County Board of Health.

Lawrenceburg, Nov. 15, 1897.

Dr. H. S. Collins, Lawrenceburg, Ind.:

Dear Sir—As to location, the school houses of the county are not unfavorably situated, and most of them are well lighted. The ventilation is principally by means of the windows, although some of them are provided with ventilating shafts. In no case that I know of are the outhouses so located that they are promoters of disease. They are usually as far away from the school building as the size of the yard will permit.

The water supply for our schools is bad. There are but few wells on the school premises, and often the water that comes from a well at some neighboring farmhouse is not good. In nearly all cases the water must be carried quite a distance, and as the pupils and teacher do not like to make many trips, one bucket of water, standing open, is used from the entire day. I take it that the water supply is the worst obstacle in the way of good health in our school rooms.

Very truly yours,

S. K. GOLD,

County Superintendent.

Lawrenceburg, October 23, 1897.

DECATUR COUNTY.

The sanitary condition of Decatur County is good, as shown by the following statistics and remarks:

The present population is about 20,000.

There were reported for the year ending September 30, 1897, 218 marriages, 198 births and 119 deaths—19 deaths less than in 1896. From infectious diseases there were five deaths from diphtheria, 3 membranous croup, 12 typhoid fever, 2 cerebro-spinal meningitis and 16 from consumption—11 males and 5 females. There were 17 deaths of persons over 70 years of age.

There was no epidemic during the year. Typhoid fever was the prevailing disease at the beginning of the statistical year, mostly cases lasting over from the months of August and September, 1896. Tuberculous diseases still prevail as formerly, and, as heretofore, are remarkable for the greater fatality among females.

The cases of diphtheria and membranous croup were mostly in October (1896) and the early winter months. Acute tonsillitis at that time prevailed to an unusual extent, making it difficult to differentiate that from the more malignant sore throats prevailing, which added to the general anxiety and fears, as well as to the gravity of the situation. The cases reported as membranous croup were perhaps diphtheritic.

During the month of October, 1897—not to be included, of course, in this statistical report—there were reported 23 cases of diphtheria, with three deaths. This disease prevailed to such an extent in the southwestern part of the county as to make it necessary to temporarily close the schools in localities to prevent its extension.

Diphtheria antitoxine maintains the confidence of the physicians who have used it, and many practitioners would deem it criminal not to resort to its use as a curative and also for immunizing purposes.

Diseases of the intestinal canal were not so common as is usual during the summer months. While the impress of malaria was manifest to a considerable extent, malarial malignancy, however, has not presented itself in its former dangerous character, even in favorable localities for its development, as it did in former years. Neuralgias still call our attention to the fact that we have nerves.

The county court house and jail are in good sanitary condition, and are kept, as is the court-house park, in good order.

Our county asylum is situated five miles north of Greensburg on a farm containing 160 acres of high, rolling, rich land, owned by the county. The buildings are brick, substantial, commodious and comfortable. There are at present 28 occupants, which is about the average. There were four deaths during the year, all over 60 years of age. The sanitary condition is good.

The orphans' home is a large, imposing brick structure, located in Greensburg. It is surrounded with ornamental and fruit trees, shrubs and vines, in a well-kept lawn, making the home attractive. The average number of children is about 40, with a capacity for the comfortable accommodation of 45 or 50 and the attendants. The home is under the personal superintendence of Miss S. M. Bonfoy, who is much interested in the work. The sanitary condition is good. No deaths during the year.

The Greensburg water works supply more than one-third of the private residences and all the public buildings and business houses with water for household uses, drinking and street and lawn-sprinkling purposes. The water supply comes from 12 driven wells, drilled through 20 feet of

rock and pumped directly into the mains. There is an average daily consumption of 250,000 gallons. The water is pure and healthful. Well and filtered cistern water is used by the remainder of the inhabitants.

Professor E. C. Jerman reports the school buildings in fair condition, with an expressed intention on the part of the township trustees to improve the condition as fast as practicable. Driven wells are taking the place of surface wells, and the sanitary surroundings are certainly better than on last report. The County Commissioners of our county are aiding, so far as in their power, to carry out the requirements of the State Board of Health, fully appreciating the importance of the duty entrusted to them.

In the interest of public health I would suggest that pulmonary tuberculosis be included among the infectious diseases not necessarily to be quarantined, but in the line of safety and of educating the people as to the nature and danger of the disease, and that the same be placed in the "preventable disease circular," with special instructions for destruction of sputum, disinfection and isolation, so far as is consistent with the humane care of the afflicted. Those interested, sick and well, would surely appreciate our efforts and receive kindly such information given for their protection or amelioration.

For a period ending September 30, 1897, the records of the Decatur County Board of Health show 841 births, of which only 133 children were named, and 708 in which the records are consequently incomplete. This should be remedied. To correct this, I will venture to suggest that the physician or midwife be required to leave a birth blank with the family, to be filled out by them and sent to the health officer, to insure completeness in the records. The parents surely can appreciate the importance of perfected records and certainly would fill the blanks as soon as the child was named. It is surprising how indifferent some physicians are with regard to filing the details of the birth and death blanks.

J. H. ALEXANDER M. D.,
Sec'y Decatur County Board of Health.

DEKALB COUNTY.

In regard to questions submitted in your letter of recent date, I will say that the health of this county has been good for the year ending September 30, 1897. Comparatively few cases of contagious diseases have occurred during that time, and none have become epidemic. The public health in this county is usually good, and during the year just past it has been exceptionally so. This result has been secured in part by the better isolation of contagious diseases and also for the reason that people have better ways of living and caring for themselves than formerly. The open well is almost a thing of the past in DeKalb County, as the tubular has taken its place everywhere.

The Superintendent of Public Schools, Prof. H. E. Coe, tells me that the sanitary condition of the school houses throughout the county is good, and the same may be said of the court house and jail.

We very much need a new county infirmary. Ours is an old building, in process of decay and without modern improvements, being heated by stoves in the old-fashioned way.

This county has five organized boards of health; that is, one for each city and incorporated town. While there is need of greater efficiency in some cases, the most are doing excellent work. One drawback is that the County Secretary holds his office by yearly appointment, so that when one officer gets the work well under way, a new man is appointed, who has to go over the same ground to become well acquainted with the condition of the several boards of health and the requirements of physicians within the county.

There were reported from January, 1897, to September, 1897, inclusive, five cases of typhoid fever, eleven of diphtheria, three of scarlet fever and one of measles. As regards the prevalence of phthisis at the present time, I can give nothing very definite. Deaths only are reported, and so many consumptives die of other diseases that the death reports do not give much information.

At a meeting of the DeKalb County Medical Society, held last week, the following question was discussed by most of the members present, viz.: "Is pulmonary phthisis on the increase in this county? If not, what means have been most effective in limiting the spread of the disease and what measures are to be recommended for the same purpose in the future?" The majority of the physicians present expressed the belief that there is less consumption in proportion to the population now than there was a decade ago; that this decrease is largely due to better hygiene, and that hope for the future lies in the better education of the people. Consumptives should be taught to take proper care of the sputum; and society at large how to take care of the general health. That while contagion may be a factor in all cases, it seems also to be well established that the strong and healthy are measurably immune to the disease. So that probably after all, good general hygiene furnishes the best protection known to the profession at this time.

A few words as to the quarantine of contagious diseases. I believe that there would be less exposure in that class of cases where at first the symptoms are not positive, and yet sufficient to warrant isolation, if physicians were supplied with special cards (white, or of different color from any now in use) to display on premises until such time as the diagnosis can be made.

Very truly yours,

D. J. SWARTS, M. D.,
Sec'y DeKalb Co. Board of Health.

DUBOIS COUNTY.

This county has a reputation for its natural healthfulness, and its sanitary condition for the year ending September 30th, 1897, was better than during the previous year. There were fewer deaths by 26 than in 1896, the number of deaths from all causes being 152; number of births, 404. There were no deaths from scarlet fever, measles or cerebro-spinal fever.

Below is a summary of deaths from leading causes:

DEATHS.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Total.
Diphtheria.....	9	1	1	.....	.....	.....	.....	.....	.....	1	2	.....	14
Mem. croup.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Whooping cough.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	3	1	6
Typhoid fever.....	2	2	1	.....	.....	.....	.....	.....	.....	.....	1	2	8
Phthisis.....	2	.....	1	4	.....	4	.....	1	1	2	1	1	17
Pneumonitis.....	3	.....	3	6	4	2	.....	1	1	.....	1	.....	21

Contagious and infectious diseases reported were:

Diphtheria 132 cases.
 Measles 54 cases.
 Scarlet fever..... 52 cases.
 Typhoid fever 33 cases.

Physicians never reported cases of whooping cough, although there were six deaths from this cause, five during the last quarter. As a general thing they fail also to report measles.

We have had trouble with diphtheria, mostly in Columbia and Harbison townships, and the disease is still prevailing to some extent in various sections of the county. The doctors are careless in some instances, but the greatest trouble is with the public. As I said in my last report, it would require a police force to compel the people in some of the districts to obey the rules and regulations. Many of the people are rebellious, and some of them too ignorant, and it is a very hard matter to get the rules complied with. However, a better state of affairs is being brought about gradually, and a few prosecutions which may follow will set a good example for them. One doctor (?) has persisted in reporting cases as "ulcerative tonsillitis," and actually reported one death from "strangulation from matter in the throat." All of these cases were undoubtedly diphtheria.

The county jail is in fairly good condition, and so is the poor asylum. The jailer bought a supply of disinfectants and uses them. The court house has been remodeled and renovated and is in a better sanitary condition than ever before.

Below is County Superintendent Wilson's report as to the schools.

B. B. BRANNOCK, M. D.,
 Sec'y Dubois Co. Board of Health.

Jasper, Ind., November 4th, 1897.

REPORT OF SUPERINTENDENT OF SCHOOLS.

The sanitary condition of the common school houses of Dubois County, while not all that is desired, is far better than the sanitary condition of many homes from which pupils come to attend school. Within the last year twenty-five new rooms have been provided, and in these close attention has been given to ventilation, light, heat, seating arrangements, etc.

We have been successful, in a measure at least, in getting cleaner

houses and yards, and purer water. However, in some cases it seems almost impossible to crowd the schools very far ahead of the general condition of the homes in the immediate neighborhood.

Diphtheria is still the common enemy of many school rooms, and no doubt will continue to be until some physicians, teachers, or parents have been taught its danger from a legal standpoint.

Yours truly,

GEO. R. WILSON.

Jasper, Ind., November 2, 1897.

DELAWARE COUNTY.

The summer and fall of 1897 was marked by a severe epidemic of dysentery in Delaware County. From August 1st to November 1st there were at least 80 deaths in our county from this disease. Total number of cases estimated at 500. This epidemic has presented features of decided interest to physicians and sanitarians. The disease in many instances was of a malignant type, the dyscrasia being so extreme that hemorrhages occurred not only from the bowels, but from other mucous surfaces. Emaciation was persistent and progressive, until at death the patient was literally "skin and bones." The cause of the epidemic may be traced, I think, to bad water, unsanitary surroundings and improper food. It is true that cases of the disease occurred where these factors did not prevail, but the epidemic originated in an unsanitary district where the water and food used were unwholesome.

City Health Officer Ried has kindly made me the following report:

"During the summer and fall months of last year we experienced a very severe epidemic of dysentery in this city. I regret very greatly that I am not able to give you the number of cases, which I feel safe in saying was over two hundred; total number of deaths fifty-one (51); of this number twenty-one (21) were under one year old, twenty-six (26) were over one year and under five; one was twenty-three, one twenty-six, one fifty-four, one seventy-eight. The colored population of the city is 831—males, 439; females 392. Yet there was not a death from dysentery among them.

"As to the cause or causes of the epidemic, I have no new theories to advance. I found that in the malarial districts, where boggy, bad well water was used for all domestic purposes, the disease was more prevalent and produced more fatal results. The extremely hot, dry season was one among the aggravating, intensifying and harmful factors. The ingestion of unhealthy and improperly prepared food and unripe fruit contributed very largely as an exciting cause.

"Very truly yours,

"S. M. Ried, M. D., Health Officer."

During the year I have visited various portions of the county where contagious diseases prevailed and have taken necessary measures to establish and maintain quarantine. In other instances, from time to time, I have written instructions and kept in touch through the mails with the

sanitary conditions of the county. With the exception of the dysentery epidemic no serious outbreak from any one disease has occurred.

The county institutions are in good sanitary condition. I make weekly visits to the jail and always have found it clean and free from foul odors.

Most of our physicians send in their reports promptly. As a rule the physicians observe the required precautions in dealing with contagious diseases. I notice a growing disposition among the laity to exercise precautionary measures in the presence of contagion, and in a few instances citizens have complained of the neglect on the part of physicians in enforcing the law. I have found a great aid in the intelligent support of school superintendents and teachers. Teachers are instructed to watch closely the health of pupils, excluding them from school on the faintest suspicion of contagious disease.

The subject of tuberculosis should demand the most earnest attention of all sanitarians. That the disease is increasing, I have no doubt. In conjunction with City Health Officer Ried, I made a personal appeal to the City Council asking that our dairies be licensed and a competent inspector appointed to guard the sale of meats and milk. As yet the Council has taken no definite action.

HUGH A. COWING, Health Officer.

FAYETTE COUNTY.

The health report of Fayette County for the year ending September 30th, has been purposely held back hoping to hear from the back numbers, but as there is danger of being counted out, I will not wait till the end of the quarter to make my report.

All the reports are in except from two neighborhoods in the western part of the county. The importance of complying with the requirements of the law might be made more impressive by publishing the names of the M. D.'s who are derelict of duty in filling out and sending in forms 5, 7, and 9, and I offer this as a suggestion.

The general health is good. The sanitary condition of the school buildings throughout the county, as well as the jail and county asylum, is excellent.

Whooping cough prevailed to some extent, but in so mild a form that medical aid was seldom summoned and few cases were reported. Of eight cases of diphtheria only one resulted fatally. Of infectious diseases consumption heads the list with seventeen deaths, and of thirteen cases of typhoid fever, seven were fatal. Twenty-one cases of scarlatina and seventeen cases of measles were reported; no deaths. Spinal meningitis caused three deaths during the year.

As a rule the physicians have been faithful in carrying out the precautionary measures to prevent the spread of disease. The instructions in the way of circulars sent out by the State Board of Health have been promulgated and the people are interested in the good work.

S. N. HAMILTON, M. D.,
County Health Officer.

Connersville, December 17, 1897.

FLOYD COUNTY.

This is a most healthful region of the State. During all of the year we have been especially well. Storms of those contagious diseases usual to childhood have gone over us, happily with few fatalities.

From January to April an extensive epidemic of measles existed, the cases being so numerous that physicians became tired of reporting them. It is estimated that for January there were 600 cases, and as many more during the two following months. The great majority received only domestic treatment or medical advice sent on a statement of the condition. The discipline for children of the affected families remaining out of school was not well enforced by the teachers. Physicians who recall the terrible mortality of measles in adults from the exposures in army life join in the wish that every male child, at least, should be safely through with the disease at home, and especially when the prevailing type is mild.

From April to about September there were throughout the county probably 600 cases of whooping cough, with very few deaths from the usual complications. This disease, as well as scarlet fever, of which there were a few cases, was not reported after the middle of September.

Dr. E. P. Easley, of the New Albany Board of Health, writes to this office as follows: "In making this, our annual report, we have great pleasure in saying that the sanitary condition of the city was never in a better state than at present. The city is remarkably free from sickness, and has been so during the past year, with a death rate lower than ever recorded.

"But few cases of diphtheria occurred, and only three of these were fatal, the infection in every case being confined to the houses in which the disease originated. The usual means of isolation and disinfection were employed. This disease has always been conspicuous here by reason of its absence. It has never been epidemic in this city, and rarely ever have sporadic cases occurred. Few cases of scarlet fever existed, and these of a mild type.

"Less by far than the usual number of cases of typhoid fever were reported, and some of these of doubtful diagnosis, being, in all probability, cases of continued malarial fever. Measles and whooping cough have been more prevalent than usual, but attended with a mortality almost nil.

"Mr. Samuel Mann, city engineer, and Mr. John Conkling, street commissioner, have always cheerfully co-operated with us in our efforts to keep the city clean."

Prof. Levi H. Scott, superintendent of schools for Floyd County, in response to your request that a report on the sanitary condition of the public schools be had from the superintendent, states the following:

"There are in Floyd County, outside of the City of New Albany, forty-eight schools, in all of which I am glad to say, the sanitary conditions are good. At the opening of the present session the houses and out-buildings were put in good condition—the floors, seats, desks, windows and door casings all being scrubbed, leaving not a vestige of dirt of last year's use. A large per cent. of the houses are frame, with stone or brick foundations supplied with air grates, which give free circulation of air under the floor. The houses are all one story with one exception. Houses having two rooms contain a wide hall separating the rooms. The water used is

supplied in most cases from cisterns cased with brick and plastered with a mixture of sand and cement. The cistern platforms are so made as to prevent any waste water or filth flowing into them.

"Each school is provided with two out-buildings, one for the males, the other for females. These out-buildings are generally constructed over vaults which are from five to ten feet deep and cased with brick. The trustees have exercised good judgment in the location of the school houses, all being built on high ground away from localities frequented by malaria. The school yards are generally graveled, making them quite dry even in wet weather.

"Upon the matter of ventilation I can not speak so flatteringly. In a large per cent. of the school buildings there is no means provided for ventilation other than the doors and windows. It seems strange that such an important matter in the construction of a building to be inhabited by so many children should be so sadly neglected. All trustees who contemplate building, remodeling or repairing school houses, I refer to the article on 'School Architecture' in State Superintendent D. M. Greeting's report of 1896. This article is chock full of good advice to those who build the houses in which our boys and girls are educated."

The subject of proper school sanitation is of so great importance that I may be allowed to introduce in this connection the communication of Prof. W. H. Hershman, superintendent of city schools, to the Common Council of New Albany in reply to the question submitted to him by resolution, "What has been gained by the 'no recess' plan in the public schools?"

"The length of sessions in which children are confined to the school room has been very materially shortened, beginning fifteen minutes later in the morning and closing twenty-five minutes earlier each session than formerly, thus giving children ample time to complete their choring and to enter school on time. Also, the long dinner hour, from 11:40 to 1:15, seems very necessary to good digestion and perfect health. The evening dismissal at 3:35, instead of 4 o'clock as formerly, gives children an opportunity to assist in the work about home, distribution of newspapers and other jobs that many children are engaged in for securing their bread and butter. With a fifteen minute recess such economizing of time would be impossible without great hindrance to the progress of the pupils. Then, again, every pupil is permitted to take his own recess whenever he feels the demand of nature made upon him to do so. See Section 7 of the Rules of the Board, which reads as follows: 'Any pupil who desires to do so, for hygienic purposes, may be permitted to leave the room at any time during either of the sessions. And in no case shall this privilege be denied him unless it is believed that he abuses his privilege. In no case shall a pupil be punished for leaving the room to attend to aforesaid hygienic duties.'

"The disciplinary effect of the 'no recess' plan is marvelous. The old time fights at the fifteen minute recess period are wholly unknown. At those periods of recess the large boys ran over and knocked down the small boys, according to the principle that 'might makes right,' and even dragged them from their seats in the privy while in the very act of attending to nature's call, and thus left the little fellows in a foul condition and the teacher with a disagreeable case of discipline to be attended to, but

the straight of the story could seldom be found. The foul and indecent language so common on every playground, and especially within and around every privy, is avoided by the 'no recess' method.

"The violent exercise of fifteen minutes is too sudden and severe for good health, and this exercise is usually just as suddenly stopped as it is begun. Children called to the school room from this violent and many times rude exercise are covered with perspiration and are well winded, so much so that it requires from ten to fifteen minutes more to regain their former vigor in order that the work of the school may proceed. Every teacher knows this to be true. The advantage, then, of the 'no recess' plan in respect to exercise is beyond comparison with that of the recess plan.

"The exercises of the school consist of systematic and judicious physical culture movements, during which time, if the weather be not too severe, the windows are thrown open, thus ridding the room of all foul air, and furnishing excellent opportunity for outside air to come in to give tone and new vigor to the body. These exercises of about five minutes each are separated as often during the day as the teacher thinks necessary. All the children on the lower floor are permitted to pass to the basement, or out-house as the case may be, once during each session, at which time they are under the immediate supervising eye of the teacher. The children of the upper floors are not permitted this privilege for the reason that proper supervision can not be secured.

"The writer believes most heartily that children should have plenty of free, pure air exercise, but he also believes that it should be given in the most healthful and invigorating way. He furthermore believes that children should not be prohibited from their obedience to nature's call. In his opinion, there is nothing more serious to the health of children than to prevent such obedience. To the fostering of healthful rights in these respects has been and will continue to be one of the strongest policies of the school. That the old fashioned, rough-and-tumble fifteen minute recess will not furnish such safeguards to the health and morality of our children, twenty years of careful experience can testify, and seventy out of the seventy-five teachers of New Albany will corroborate."

The above several reports I respectfully offer, hoping that they cover, for the most part, the very considerable range of subject assigned me in your communication of this month.

Very respectfully,

JOHN H. LEMON,
Sec'y Floyd Co. Board of Health.

FRANKLIN COUNTY.

In compliance with your request of the 20th inst., I submit the following report for Franklin County:

The county poor house is in good sanitary condition. The buildings are all of brick and well ventilated, but not well heated. They have separate buildings, one for the males and one for females.

The asylum and children's home are located about one mile south of the court house on the west bank of the Whitewater river, on grounds.

seventy-five feet higher than high water mark, and about 1,000 feet distant from the river. The water supply for both homes is the best. The asylum is about a quarter of a mile distant from the children's home. At the present time they are adding an addition to the children's home which, when completed, will be one of the best, as to comfort and sanitary condition. Included in this addition is a sick ward, bath room, water closet and sleeping apartment. While on this subject we must give credit to the matron of the children's home. It is one of the best kept houses in the State—beds, floors and all are as clean as can be. They have very little sickness.

The court house is a fire proof building, built of stone and brick, but has no modern improvements. The jail is a modern building of brick, well ventilated, heated with stoves and has bath room and water closet.

The several district schools are supplied by means of well water, heated by stoves and all are in fairly good sanitary condition. The school building in the city of Brookville is a large three-story brick, well ventilated and heated. The water supply is good and everything is kept perfectly clean. The school board and teachers are to be congratulated for their faithful work.

Brookville underwent an epidemic of measles last spring. Out of 150 cases reported there were no deaths, except five from complications. Typhoid fever, 25 cases reported in the county and 5 deaths reported; diphtheria, 15 reported and 3 deaths; scarlet fever, 12 reported, no deaths. We had 12 deaths from phthisis reported in the county. Number of deaths reported in the county, 135; number of births reported, 225.

While I have received better returns from the physicians in the county in the past quarter, it is impossible to get them all to make returns.

Respectfully yours,

JAS. F. WEST, M. D.,
Sec'y Franklin County Board of Health.

FULTON COUNTY.

The general health of the county during 1897 has been good, except, perhaps, during the last winter and early spring months, when la grippe furnished work for all our physicians.

I find that, as a rule, the physicians report births and deaths better than formerly, although a few are very careless, especially in regard to the deaths. Contagious diseases are well reported, excepting measles and typhoid fever. We have been free from epidemics of any sort, and only a few cases of typhoid and scarlet fevers and diphtheria have been reported.

During the summer months I visited the smaller towns in the county, and found the sanitary conditions in them good.

In Rochester an important improvement in the way of sewerage would be of great advantage. Owing to fact that we have a gravel and sand subsoil, which affords a convenient means of disposing of waste water, it is difficult to convince the people of the necessity of sewerage. In consequence we have cesspools and vaults to contend with, especially during the summer months.

The county farm, under the management of Mr. Joel Brubaker, is being conducted in an excellent manner. Our new court house is completed, and is modern in every way. The city school buildings are new, as is also the jail; so that our public buildings are all that could be desired.

The country schools are not what they should be. Many of them are in a bad condition, and it will take time and constant urging to bring them up to the proper standard.

Very respectfully,

JOHN W. M'MAHAN,

Sec'y Fulton County Board of Health.

Rochester, Ind., Dec. 30, 1897.

GIBSON COUNTY.

The sanitary condition of the county poor house is far above the average houses I have visited. The surroundings are perfect and the drainage good, we having put in the drainage this year. The cellar is dry at all times, as far as I have been able to learn. Steam heat is used in the building, and two bath rooms and closets are in good working order. Some improvements might be made in the grading around the building.

The sanitary condition of the court house is good, except that possibly the closets might be in a better condition with proper care.

As to the jail, the sanitary condition of that building is the worst that can be found anywhere almost, viz.: Drainage, you might say none; poor light; building improperly built in every respect, and has been condemned by grand jury. I think a new and more modern one should be built at an early date.

We have had typhoid fever in almost, if not all, townships in the county in its worst forms, due to impure drinking water, which has been clearly proved upon examination.

There have been numerous cases of diphtheria in Princeton, a few in and near Oakland City, Francisco, Haubstadt and Fort Branch; yet the mortality was light, owing, I think, to the use of antitoxine, which has been freely used.

There have been many cases of scarlet fever in the county, but of light forms. No cases of smallpox or cerebro-spinal fever during the year, and but little hog cholera.

I have no reason to think that phthisis is on the increase in Gibson county.

Yours, etc.,

A. R. BURTON, M. D.,

Sec'y Gibson County Board of Health.

CONDITION OF THE SCHOOL BUILDINGS.

Dr. Burton:

In my observation of the condition of schools in the county, I find it very necessary to recommend the following:

Many buildings are seriously in need of a thorough scrubbing. The desks and floors in many houses were not in suitable condition at the

opening of school. A better system of ventilation is needed, and I suggest that every building be provided with a reliable thermometer. The out-buildings (closets) are in a fair condition. The grounds are in a good condition, and locations have been carefully selected. The cisterns, wells and drinking vessels in most instances are in a fair condition.

The most serious need at present is more careful ventilation. This point I shall bring before the teachers at the next association, and insist upon them being more careful.

The above is my opinion, and the changes suggested can be accomplished without a great effort. I do not think it necessary to have such a stringent set of rules as have been suggested by the board. If our buildings were all put in good condition, they might easily be kept so, if the heating and ventilating were carefully done.

Respectfully,

JOHN T. BALLARD.

Princeton, Ind., Nov. 20, 1897.

Secretary State Board of Health, Indianapolis, Ind.:

Dear Doctor—Our jail, as you will notice in my report, was condemned on account of bad sewerage and sanitary arrangement, and the grand jury has also done the same, as my report states. I have doubts, unless you write the Commissioners or come here, that they will refuse to build a new jail or repair the old one. I would advise that you take some action in the case while they are in session this week.

Yours, etc.,

A. R. BURTON,

Sec'y Gibson County Board of Health.

Princeton, Ind., Dec. 8, 1897.

HAMILTON COUNTY.

In answer to your request concerning the sanitary condition of Hamilton County for the year ending September 30, 1897, I will report that during the year we had no epidemics except measles, which was in a very mild form. Typhoid fever was reported in several places in the county, two or three cases in a place. A few case of diphtheria were reported, but by strict attention to sanitary measures it was prevented from spreading in almost every case.

Our trustees in the various townships have been very careful to put the school houses and surroundings in a good sanitary condition. The poor house and jail have also been placed in very fair condition.

The majority of the people in the county are beginning to see the importance of the prevention of disease, and more cheerfully comply with the requirements of the State Board of Health.

Yours respectfully,

E. C. LOEHR,
Health Officer.

HANCOCK COUNTY.

The health of the county has been better than last year. Have had no epidemics of any kind to any extent. Have had some dysentery, which was distributed generally over the county. Have had some diphtheria, measles, scarlet fever and typhoid fever. The latter disease I have had much trouble in getting the physicians to report, but think in time will have no trouble.

The sanitary condition of poor-farm buildings is in excellent shape, but can't say so much for county jail, the condition of which is bad. I have made complaint to the County Commissioners, and received a promise that they will put everything in a sanitary condition.

The total number of deaths from all causes is 172. Of this number there were 29 from consumption, 7 from typhoid fever, 7 from cancer, 12 from old age, 12 from pneumonia, 7 from diphtheria, 1 from hydrophobia and the rest from some of the various causes which prevail in this country. There were 448 births in the county during the year.

The special request for report of death from hydrophobia I will give as per report from the attending physician, Dr. C. A. Barnes: "June 1, 1897, a boy about eight years of age was brought to my office for treatment. He had been bitten by a dog, which the boys who were with him at the time said he was teasing. There were two or three small wounds of the scalp made by the dog's teeth. Dressed by stitching and iodoform. Wounds healed without suppurating. Five days afterward the same dog bit a woman and a smaller boy. At this time the dog showed signs of rabies and was killed. Soon after the two last persons were bitten all three parties were taken to the Pasteur Institute at Chicago for treatment. After his return from Chicago the boy was in perfect health until the morning of June 30. The following is from my notes as made while attending the patient at his home in this place:

"June 30, commenced to have pain in region of the wounds on the head. Was nervous and had difficulty in swallowing. As he was constipated, his mother gave him a cathartic. On the morning of July 1 I was called to see him. Found him very much flushed in face and nervous. Temperature, 103; pulse, 120; respiration, 40.

"Saw him four times during the day. His temperature declined to 101½ in the evening, but the pulse increased to 140 and respiration to 48. It was almost impossible for him to swallow anything. Even a suggestion of eating or drinking brought on violent contraction of the muscles of deglutition. Treatment was by chloral bro. potass., used per rectum. There was no inflamed appearance of wounds or fauces.

"Saw patient at 6 a. m., July 2. Pulse, 108; temperature, 102; respiration, 24; very nervous. Rational, but showed great fear of impending danger. Cried out and complained of his throat hurting him. At 6:30 a. m. he had a well-marked convulsion, or rather, a spasm of upper part of the chest and throat. At this time the face and head were very much congested. He would jump upright in bed, trembling with fright. These spells were only of about one minute in duration, and repeated with about fifteen-minute intervals. Very much prostrated. Perfectly rational at all times.

"Saw him at 11 a. m. Frequent spasms of muscles of throat and neck. Mind clear and talked better. With much effort, succeeded in swallowing a small lump of ice. Pulse at this time, 108; respiration, 24; temperature, 105. Pulse very weak. Complained of pain in head and throat. Talked better, telling me what happened once before when he had a sore throat. At 1 p. m. he died suddenly of exhaustion."

The other persons who were treated in Chicago at the same time with this boy have continued in perfect health up to this time. I trust the history of this case and the happy results of the other two so far will help us very much in testing the Pasteur cure for hydrophobia.

Respectfully yours,

J. H. JUSTICE,

Sec'y Hancock County Board of Health.

HENDRICKS COUNTY.

Our court house is in good, and our jail and poor house in fair sanitation.

There were scattered over the county during the year six cases of typhoid fever, which were reported (some not reported), with three deaths; diphtheria, 16 cases reported, with one death; scarlet fever, five cases reported, and no death. Measles of a mild type prevailed at the reform school and in a few neighborhoods as well.

Have quarantined diphtheria and scarlatina, but find it difficult to quarantine measles, as the people still think their children ought to have them while at home, so they can give them "yarb teas."

I have advised the boiling of the water in the families where the typhoid fever was developing, and so far we have only had one case in a family.

There were five deaths from phthisis during the year.

Hog cholera prevailed to an alarming extent during almost the entire year, and is prevailing to a less extent now. This applies to almost all portions of the county. Complaint comes to me from many citizens at Plainfield about the sewage from the State farm, but I have been accustomed to pay but little attention to anonymous letters. I have no doubt but that amount of sewage, emptied out into a stagnant or dry creek almost within a stone's throw of town, is the worst kind of a nuisance. Herewith I send you Superintendent Hostetter's report.

Respectfully submitted,

W. J. HOADLEY.

Danville, October, 26, 1897.

COUNTY SCHOOL SUPERINTENDENT'S REPORT.

Seventy-five per cent. of the school houses and premises are in fair sanitary condition. In about 25 per cent. of the school houses there is a lack of proper ventilation, or too much ventilation, on account of being badly constructed in the first place, and also because repairing has not been properly attended to. The premises of quite a number are not adequately drained. The outbuildings in many cases are not looked after

close enough. Privy vaults are not cleaned, and if cleaned at all, are done just a few days before school begins, when they should have been cleaned at the close of the previous season of school. The buildings erected or repaired in the last five years are in excellent sanitary condition, and there has been a marked improvement in all school districts in the county, looking to a better sanitary regulation.

Yours,

J. C. HOSTETTER,
County Superintendent.

HOWARD COUNTY.

The sanitary condition of this (Howard) county is first class. The Board of County Commissioners visited the county jail, poor asylum and orphans' home only a few days ago, and made report that all were in first-class sanitary condition. Our County Superintendent of Schools, Mr. Miller, reports his department O. K.

Very truly,

R. H. SMITH, M. D.,
Sec'y Howard County Board of Health.

Kokomo, December 30, 1897.

HUNTINGTON COUNTY.

As regards the sanitary condition of Huntington County, my observation is that the health of its citizens depends upon the kind of weather prevailing. No epidemics have occurred but what atmospheric influences, such as hot or cold, dry or wet, were potent causal factors. A long drouth continuing through August and September was followed by more than the usual amount of typhoid and diphtheria. It seems obvious that a contagium distributes better in dry seasons.

About 50 cases of diphtheria occurred in the county during the year, and these were confined to no particular locality nor month. There has been no epidemic of scarlet fever, smallpox or cerebro-spinal fever in the county. Hog cholera has not been prevalent. About one-third of the adult deaths have been from phthisis.

The sanitary condition of the poor house and the jail is commendable. School trustees seem well informed upon the subject of sanitation.

Respectfully yours,

CHAS. L. WRIGHT, M. D.

HENRY COUNTY.

In compliance with your expressed wish, I submit the following relative to the health conditions of Henry County for the year ending September 30, 1897:

The sanitary condition of our county is good. The surface has a prevailing rolling contour, affording excellent surface drainage; the lowlands are thoroughly underdrained, hence such a thing as the existence of bog lands, swamps and catch basins for the accumulation and retention of water is unknown. As a consequence, although there is occasionally manifest an undercurrent of malaria in a small portion of our diseases, such things as typical intermittent or remittent fevers are almost unknown.

I have, at different times during the year, made inspections of the county poor house, jail and court house, and find them, as a whole, in excellent sanitary condition.

As far as able to determine, the buildings of the county poor house are well underdrained, the cellars being clean and dry. The rooms and bedding are comfortable and well kept, and there is ample accommodation for the inmates. There are at present 32 inmates, and considering the fact that they are inmates by virtue of poverty, mental incapacity and disease, the health of the institution has been good.

The jail is in splendid shape. There has been just completed a thorough system of sewerage and a general cleaning-up. It has well-trapped water closets, baths and the purest of drinking water in all its departments. There is a little deficiency of heating facilities, but I think ample provision will soon be made in that direction.

The court house is in splendid condition.

From conversation with our County Superintendent of Schools and school trustees, I learn that the condition of our school properties is, perhaps, above the average. We have quite a number of new school buildings, all of which are correctly constructed as to light, heat and ventilation. The older structures, while lacking in one or more of the above particulars, are, as a rule, well kept, from the sanitary point of view. The thing in which these properties is most deficient is good tubular wells.

I find that there have been reported during the year, of diphtheria, 20 cases; scarlatina, 25 cases; typhoid fever, 17 cases. Of deaths from these diseases I find, of diphtheria, 2 cases; scarlatina, 1 case; typhoid fever, 4 cases. None of these diseases have occurred in epidemic form, and from the relative reported mortality, I am inclined to think that many cases pronounced diphtheria were cases of folliculous tonsillitis.

Scarlatina occurred sporadically, and, for the most part, in simplex form. I think that most cases of typhoid fever can be traced to lowness of water in wells or polluted water supply.

As to consumption, there were reported 22 deaths out of a total of 194 deaths from all causes.

There has not been a time in several years that hog cholera did not prevail to a greater or less extent in some part of the county, but, from the best information I can get, it is not nearly so prevalent this year as formerly.

Respectfully submitted,

E. S. FERRIS,

Sec'y Henry County Board of Health.

CITY OF KNIGHTSTOWN.

As a review of the general health of Knightstown for the year ending October 30, 1897, I have the following to say:

The health for the last year has been extremely good. We have had no diphtheria here for four years. Scarlet fever existed only in one family in the past year, and that in mild form. The family was properly quarantined and the spread of the disease was prevented. Measles existed in one family only. Typhoid fever existed in three families. There were no deaths from either of the contagious diseases.

Total number of deaths for one year, 15; number of deaths per 1,000 inhabitants, $7\frac{1}{2}$. Number of contagious diseases: Measles, 3; typhoid fever, 4; scarlet fever, 3; total number, 10.

The people of the town are wide awake to the advantages of good sanitation, and where anything that is detrimental to their best interests and good health occurs they at once raise an objection and notify the health officer, and he proceeds to abate the nuisance as promptly as possible.

The streets and alleys are kept clean by frequent use of town scraper. Back yards and privy vaults are examined once a year, and garbage is not allowed to accumulate.

Respectfully submitted,

F. J. DRAKE, M. D.,
Health Officer.

Knightstown, October 30, 1897.

JACKSON COUNTY.

In answer to your request of October 20, 1897, will say that for the year ending September 30, 1897, the sanitary condition of this (Jackson) county was fairly good. The low, wet lands have been ditched to a great extent and much care has been and is being taken to remove filth and garbage, burying or burning the same, with some few exceptions.

Several cases of typhoid fever occurred in different parts, yet the mortality was small. Diphtheria did not prevail to a great extent, and the death rate from it was light.

Judging from the reports of our physicians, who until the last few months have failed to report all, to the best of my belief, there has been no alarming epidemic of any disease during the year. The mortality will be seen by referring to the quarterly reports, and doubtless will compare favorably with any other county in the State. The water works that supply the city of Seymour are not satisfactory. The town and the country people in general are supplied with good, pure drinking water from wells, cisterns and springs.

The county asylum for the poor is conducted upon as good hygienic principles as could be desired. Thanks to the Board of County Commissioners and the efficient Superintendent for the good care of the unfortunate poor.

The court house in all of its departments is in excellent condition. The privy vaults are constructed according to the latest improved methods.

The jail is not in as good sanitation as it should be. The ventilation is poor and the drainage from the receptacle for feculent excretions is faulty. I have called the attention of the County Commissioners to this unsatisfactory arrangement.

Replying to my request, County Superintendent of Schools Prof. J. E. Payne, under date of November 2, 1897, said:

"The school houses and grounds are in a fair sanitary condition, as far as I am able to report. Those that I have visited, with only a few exceptions, are well drained, have good pumps or buckets, with faucets attached. Grassy Fork trustee has placed a good pump at each school house, as has also the trustee of Driftwood Township. Hamilton Township has some cisterns. The houses are in a fair sanitary condition. I have visited Carr, Owen, Jackson, Redding, Brownstown and Salt Creek townships only partially. The ventilation is about as good as could be made with the present houses."

Respectfully submitted,

DAVID J. CUMMINGS, M. D.,

Sec'y Jackson County Board of Health.

Houston, Ind., November 30, 1897.

JASPER COUNTY.

The county poor farm comprises 240 acres sandy loam, well tilled land, with two two-story buildings, one frame and the other brick. Present inmates number 11—eight males and three females.

Rensselaer, the county seat, has 2,500 inhabitants; is drained by sewers and tile and supplied with water from deep drilled wells. The county jail is of brick, heated by steam, and contains one inmate. Deaths in the city during 1897 number 25; births, 73. The water supply of the county is from deep drilled wells. A new court house is being constructed and will be completed in about 15 days.

Your last question, "Do the doctors fully report?" I think not. Our report blanks do not correspond with our books. Cannot this be remedied?

Yours respectfully,

M. B. ALTER, M. D.

Rensselaer, January, 13, 1898

CONDITION OF SCHOOL HOUSES.

Not all of the schools of the county are heated by "ventilating heaters." A large per cent. are ventilated from the windows. Most of our blackboards are slate; some are glossy. Our school rooms were well cleaned before the opening of the school, and now are carefully swept each day.

The windows of each building have curtains of a dark color. There are Outhouses and good water are provided, there being a well at most houses. Teachers lower windows from top, and are very careful about drafts. Heaters are being introduced as fast as our means allow.

Rensselaer has two large brick school houses, one heated by furnace, the other by heaters. The city is putting in a fine water system, the water to be pumped from deep drilled wells. good drilled wells at each school building.

Yours very truly,

LOUIS H. HAMILTON.

Rensselaer, Ind., January 11, 1898.

JEFFERSON COUNTY.

The health of the people of Jefferson County for the year ending September 30, 1897, was unusually good. I cannot recall a single epidemic that occurred in the county during the year. We had a slight epidemic of scarlet fever, mumps and chicken pox in Madison during the month of October of the present year. There were also a few cases of diphtheria reported. The cases of scarlet fever and diphtheria were all of a mild type, and caused no deaths. The proper place for this matter would, of course, be in the report for next year, and I mention it here only to show how your first paragraph in health circular No. 4, in which you say, "Simultaneously with the opening of the public schools, diphtheria, measles, mumps, scarlet fever and many other diseases usually increase," has been vindicated.

The health of the inmates of the poor house has been fairly good during the year. The sanitary condition is not good. The house is old and without modern improvements. The situation is also faulty, being in a deep valley, with precipitous hills on the north and south, and near the Ohio River. This makes the situation foggy and damp, while the valley causes a natural draft for the cold air from the river. The rooms are all heated by the open grate, thus placing in jeopardy the lives of the insane and epileptic inmates. The Superintendent, Mr. John Cook, makes every effort to keep the house and inmates clean, and has the sanitary condition as good as possible under the present surroundings. I understand the County Commissioners are looking forward to buying a large farm on the dry and level upland, and should they do so, I presume they will erect a commodious building, with all the modern improvements. This "is a consummation devoutly to be wished."

The sanitary condition of the court house and jail is good. The buildings, though old, are kept in good repair. Both buildings were greatly improved a few years ago, when the Commissioners put in a heating plant in the court house, also water closets and urinals throughout both court house and jail. The jail is heated from the furnace in the basement of the court house hard by, thus insuring an equable temperature. The plumbing in both buildings is in first-class condition.

Mr. G. S. Taylor, Superintendent of Schools, submits the following report: "In all buildings visited I find the teachers making an effort to carry out the spirit of the rules and recommendations contained in circular No. 4, issued by the State Board of Health. Cleanliness, both of person and building and furniture, has been carefully looked after. The heating and ventilation are faulty in many cases, especially in the district schools, owing to imperfect systems employed, but are difficulties that are hard to obviate. The water is good, being supplied in the main from wells and cisterns on the premises. All buildings thus far visited have separate privies for the sexes, and are in fairly good condition.

"The health of teachers and pupils is excellent. One district school was closed a few days on account of diphtheria, which threatened to become epidemic, but was checked, and the school resumed. In Saluda Township several pupils were excluded from school on account of contact with a supposed case of smallpox until all symptoms of danger had disappeared.

"The use of paper instead of slates has become general in the Madison city schools, but it is difficult to supersede the slate in the country districts. The grounds surrounding the school buildings are clear, being free from any decaying organic matter that might be unhealthy. Upon the whole, I may say that the sanitary condition of the schools of Jefferson County is good, and while many appliances are lacking with which to thoroughly carry out the recommendations of the State Board of Health, no apprehension is felt as to the continued good health of pupils and teachers during the remainder of the school year of 1897-98."

Just before the opening of the schools I was informed that a school house in one of the out townships was in a bad sanitary condition. I visited the school house in question and found that I had not been misinformed. A contractor who was building a gravel road in the neighborhood had received permission from the trustee for his men to cook, eat and sleep in the house and feed their horses in the yard, the men, as a matter of course, using the outhouses. The whole place was in a most filthy condition; in fact, in such a condition that it would have been a great wrong to have forced the children to attend school in such a place. I ordered the trustee to have the house cleaned and the whole premises put in good sanitary condition before the school opened, which was done.

While we have typhoid fever in Madison and throughout the county to some extent, I am inclined to the opinion that it is not as prevalent as it is in some counties. Madison has a population of upwards of 10,000; yet I am positive that at no time of the year could there be found as many as a half dozen cases at one time. The cases were so few that the outbreak could not be called an epidemic. For some years there has been quite a number of cases occurring in and about the village of Hanover. The cases are usually reported during the months of September and October, and seem to follow a dry summer, when the springs and water courses are almost dry. This should be an ideal neighborhood as to health, as it is a high, rolling, limestone country of hill and dale, with pure, sparkling water gushing from every hillside, while "the air nimbly and sweetly recommends itself unto our gentle senses." I have not been able to determine the cause of the fever, but imagine that it must be due in some way to impure drinking water.

There has been no smallpox in the county for many years, while now and then there is a sporadic case of cerebro-spinal fever.

The records show that phthisis pulmonalis caused 48 deaths in Jefferson County during the year ending September 30, 1897.

Very respectfully yours,

JAMES H. MATTHEWS, M. D.,
Sec'y Jefferson County Board of Health.

JENNINGS COUNTY.

As regards the health of Jennings County, I am pleased to say that it has been good, though there has been, in the last quarter of the year, considerable diphtheria, scarlet fever and measles; but I am glad to say that, through strict attention to quarantine and the use of disinfectants, it did

not spread, though deaths occurred in each family attacked by diphtheria. There was a good deal of scarlet fever in some localities all over the county, but no deaths reported. Measles, about the same.

As regards the sanitary condition of our county, I may say that it is good. I have been called more lately by the physicians than common to quarantine, etc., but very few send their reports as they ought to. I can't get them to report their cases of typhoid, although I have notified them so to do. Often death reports are almost a total failure. I believe some think the health officer makes himself too officious. When I speak to them concerning their reports they say: "Well, we don't have any further call there after the patient dies," and of course it is neglected or forgotten. Now, to remedy that somewhat, I believe the undertaker, before making interment, should be compelled to obtain a burial permit from the health officer, and through that means the health officer would be able to furnish correct death reports.

I have visited the county jail several times during the year, and found that the sheriff kept the place in as good sanitary condition as can be expected of him, as the jail is an old building and there are none of the new improvements attached, except that they have the water works. The sewerage is bad, though the Commissioners have tried to improve same. The sheriff uses disinfectants freely, and whitewash is also often used. There has not been any sickness among the inmates to any extent.

Now, as regards the county poor house, I must say that everything is kept clean and neat, bedrooms nice and well ventilated, floors scrubbed and kept clean, and the inmates seem contented. The only drawback there is a scarcity of water. I spoke to the Commissioners, and they had a well drilled over 100 feet, but failed to find water.

The State Board rules relating to the sanitary condition of all schools has been published as directed. The Superintendent and teachers have cheerfully assisted in seeing that the rules are put in force. I did not visit all the school houses in the county, but had a letter from the Superintendent of County Schools stating that they are all in good condition.

Now, I believe this is about all. Will try to give better satisfaction in the future.

Yours respectfully,

JAMES L. HANNA, M. D.,

Sec'y Jennings County Board of Health.

JOHNSON COUNTY.

The sanitary condition of our county poor house, court house, jail and orphans' home is all that can be desired. Not a single case of contagious disease has been reported from the orphans' home.

The sanitary bulletin ordering disinfection and thorough cleanliness in school rooms before beginning of the school term has been efficient in preventing the outbreak of epidemics which usually occur on the assembling of a large number of children. Driven wells have been provided at most of the school houses of the county. The great defect in the school houses of the country districts is in the ventilation. Proper ventilation is provided in but a very few cases.

The general health of the county for the past year has been excellent. Typhoid fever has not prevailed epidemic; in fact, only 30 cases have been reported in the county for the year ending September 30, 1897. Diphtheria prevailed epidemic in only one town, that of Trafalgar. Twelve cases, with five deaths, resulted. The total number of cases of diphtheria for the year was 63; number of deaths, 10. The total number of cases of scarlet fever was 19; measles, 19. One case of smallpox occurred near the town of Greenwood. Rigid quarantine measures were instituted, and no other cases occurred.

For disinfection of school houses and private houses after epidemics of contagious diseases we have uniformly employed formaldehyde.

CLARENCE PROVINCE,

Secretary.

Franklin, Ind., January 2, 1898.

KNOX COUNTY.

I have the honor to state that for the year ending September 30, 1897, the sanitary condition of Knox County and the towns therein has been reasonably good. We have some low land, and at one time a number of swamps, but in the past few years the low land and swamps have been drained, which adds to the health of our county. There has been a wonderful abatement of malarial influence and intermittent, which were in former years common.

Contagious and infectious diseases still show their unfriendly faces, and, I suppose, ever will. Diphtheria and scarlatina are with us every year, but by persistent watching and education as to their danger and means of curtailment, we have kept them from becoming very prevalent. There have been 13 of the first and one of the second reported during the year ending September 30, 1897. In the southeastern part of our county (Harrison Township) they are having some typhoid fever. The cause is unknown, unless it is the long-continued drouth, causing the wells to fail in supplying pure water. The soil in this infected district is clay, and they have open wells.

Our county poor house is situated about three and one-half miles east of Vincennes, on a nice elevation, and is a nice brick structure. It has plenty of sunshine and nice, shady lawns in front for the inmates. The building is well ventilated and they have had very little sickness. All this is due to the Superintendent faithfully performing his duty.

Our court house, jail and school buildings are all in fair sanitary condition.

I trust that I have given you all that is necessary or proper in a report of this character, and that I may fill my small office for the public good and to the acceptance of the State Board of Health of Indiana, I have the honor to remain,

Respectfully yours,

C. W. BENHAM.

Sec'y Knox County Board of Health.

LAGRANGE COUNTY.

In response to your letter of inquiry, I have the pleasure of saying that our county infirmary, court house, jail and Rogers' Orphan Home are in good condition, and that is their usual state.

We have had no epidemic of contagious diseases, save measles. The number of cases of typhoid fever have not been numerous. Since January 1 nine cases are reported, and they have been confined principally to South Milford and vicinity and the western portion of this county. In neighborhood of and in South Milford the causes are obscured, as in that village every well is said to be a driven well, and if the cause should have been impure drinking water, it could only be after percolation through 20 to 30 feet of blue clay. Atmospheric causes are perhaps more likely. Disinfecting the excreta was used in the cases in that vicinity.

The cases of typhoid fever in the western part of the county, all of them coming under the care of Dr. Hostetter, of Shipshewana (numbering four only), he thinks were contracted elsewhere, unless atmospheric causes brought them about. The vessels receiving the excreta were carbolated and contents then buried; carbolated moisture used in sick rooms; clothes rinsed in carbolated water; vessels and hands of attendants washed therein also. His relation of cases to me and sanitary methods adopted by him shows the painstaking and careful physician.

Scarlet fever has been kept well in control by isolation, quarantine, etc., by Drs. Short, Schrock, Dryer, Broughton and Kester, who each had a few cases.

The number of cases of scarlatina reported during the year 1897 are thus far 21; of diphtheria, but one case reported; of cerebro-spinal fever, one case reported; of erysipelas, three cases have occurred, of which I am cognizant, but none were reported to me. Smallpox, we have had none thereof.

Of phthisis pulmonalis, I can only give its prevalence by the deaths occurring therefrom, which have been, from January 1, 1897, to date, 16 in the county, about one for every thousand persons.

A farmer in Van Buren Township, in the northwestern part of the county, about two months since, informed me he had lost 26 hogs by cholera, but I have not learned of any other cases.

In conclusion, I think I may truly say that our county and its towns and villages are in fair sanitary condition. I do my best to keep them so.

I sent a copy of your circular letter of August to each township trustee and school trustee in the county. As far as practicable, in most all cases sanitary requirements were complied with. In one case, after commencement of school, I had to direct cleaning of a school house and the suspension of the school for that purpose.

Upon conferring with our County Superintendent, E. G. Macham, Esq., who is a faithful and capable officer, I am informed that the schools are all now in good condition, so far as water supply, outhouses and ventilation are concerned; that in some thirty cases steps have been taken to in-

trouduce air from the outside by using furnaces or admitting air in and under the stove with closed passage way, with iron jackets around the stoves.

I think I have answered all the questions or subjects of your letter of October 20.

I have the honor to remain,

Sincerely and fraternally,

FRANCIS P. GRIFFITH, M. D.,

Sec'y Lagrange County Board of Health.

LAWRENCE COUNTY.

Yours received, and will ask that you excuse me in regard to the report of condition of county, etc., for publication, for two reasons: First, I have been down (and am not well yet) with articular rheumatism, and, second, that the condition of the jail, county poor farm, etc., are about the same as when I reported last year.

We have only had two cases of diphtheria, one of scarlatina and one of typical typhoid fever reported.

Yours, etc.,

F. S. HUNTER,

Sec'y Lawrence County Board of Health.

MARION COUNTY.

In reply to your inquiry concerning the health conditions of Marion County during the past year, I wish to say that the health has been good. There has been less typhoid fever than usual, and, while there has been quite a good deal of scarlet fever and diphtheria, they have not assumed epidemic proportions. Phthisis continues to be the worst foe with which we have to contend, but under better sanitary regulations, we hope that even this disease may be robbed of at least some of its victims.

The county asylum has been improved by the completion of the new wing, and it is to be hoped that not many years hence the other portion will be rebuilt. I understand the water supply is good, and that increased facilities for fighting fires have been added.

The workhouse and jail are in good condition. The new police station and city dispensary, which is nearing completion, will supply a long-felt want. The City Hospital, with its new addition, is in good working order.

I am happy to say that the cutting-down of the court-house yard has very materially improved the lighting and ventilation of the court-house basement. This, with other improvements about the building, places it in much better sanitary repair.

Yours respectfully,

A. L. WILSON,

Sec'y Marion County Board of Health.

Indianapolis, Ind., December 20, 1897.

SCHOOL BUILDINGS OF THE COUNTY.

In the county outside of the city of Indianapolis there are 66 brick school buildings and 37 frame buildings. In most instances these buildings are good buildings, well situated on high ground, with proper drainage and in a fair state of repair.

Several of the townships have thoroughly cleaned the buildings and furniture, and in many instances the buildings have been whitewashed or papered.

Most of the trustees use, or have used from time to time, a disinfectant in the school rooms.

The outbuildings (water closets) in many instances where there are vaults have been thoroughly cleaned and disinfected. Many new water closets have been built. Some have dry closets, removing the soil from time to time.

There are some buildings that are not clean. The walls are blackened from smoke and dust, the accumulation of years. I believe, however, that the several trustees are doing all they can in this matter, at least as far as their means will permit, and will endeavor to have all in good condition.

W. F. LANDES.

MARSHALL COUNTY.

In reply to your inquiry as to the health of Marshall County, I am pleased to say that it has been very good. There have been no epidemics.

There was an outbreak of diphtheria near Tyner—eight cases in all, with four deaths. These cases were imported from Laporte. By rigid quarantine the disease was confined to one family. There have been very few cases of typhoid fever reported, and the same may be said of phthisis.

The county institutions are in good sanitary condition. The county infirmary has about 35 inmates. Their health has been good. The buildings and grounds are kept in first-class condition.

From a sanitary standpoint, no criticism can be had as to the condition of the court house, and, save insufficient heating, the jail is in first-class condition.

The school houses over the county are in at least fair sanitary condition. Extra efforts have been made through the trustees to adopt better sanitary rules in disinfecting tin cups, lead pencils, etc., but with partial success.

Hog cholera has prevailed very generally throughout the county.

Respectfully,

S. C. LORING, M. D.,

Sec'y Marshall County Board of Health.

MAIMI COUNTY.

The health of Miami County for the year ending September 30, 1897, has been very good. During the spring months we had an epidemic of measles, but no deaths reported therefrom.

The county infirmary is in good sanitary condition and the poor well provided for. A new jail is what this county needs. The old one, situated in the basement of the court house, is not always the healthiest place, especially when crowded with unfortunate victims. It has been condemned several times by grand juries as unhealthy.

The school houses of the county are kept in excellent condition.

Quite a number of doctors are slow about sending in reports of births and deaths, making statistics very imperfect and incomplete. I think the mortality reports could be made very complete by compelling the undertakers to refuse a casket and burial until a certificate of death is furnished, signed by the attending physician or coroner. Then it would be an easy matter for the Secretary of the Board of Health to collect the reports from the undertakers, and the responsibility would not rest on the doctor alone. The reports or statistics of births could probably be made more accurate if every physician would make more of an effort to inform the people of the importance of having each and every birth registered.

As a rule, I think the doctors are giving this matter more attention, and I think by next year we will have a complete report of all cases in Miami County.

Very respectfully,

A. H. KALBFLEISCH,
Sec'y Miami County Board of Health.

MONTGOMERY COUNTY.

The sanitary condition of Montgomery County for the year 1897 has been above the average. We have had no epidemic of any kind and less sickness than we have had for 30 years. There have been a few sporadic cases of typhoid fever and a few sporadic cases of diphtheria, which we have controlled by strict quarantine. Antitoxine has been used in the more virulent cases, with decided good results. In fact, I do not know of a death from diphtheria in our county this year. We have only had to dismiss two schools this year, and only for one week each, as we used the formalin lamp for the destruction of any germs that might remain in the school houses, and have had no contagion following its use. The towns of Waveland and Ladoga have had less than their usual number of cases of typhoid fever, but I believe the percentage of deaths has been as much as usual, which, I think, is always greater in the vicinity of the towns named than in Crawfordsville or other parts of the county, and, as I stated last year, I believe it is owing to the fact that their wells are shallow and possibly impregnated with surface water.

The county asylum, jail and orphans' home are in good sanitary condition, as are also our school houses. Franklin Township is the only township in the county that has failed or ignored the order to put sterilizers and fountains in her school houses, and I regret that the law does not give us more authority in these matters.

You will probably see by our report at end of the present quarter that there have been more deaths than would appear from this report, but it has been from old age and other causes than ordinary sickness. Measles and scarlatina have prevailed sporadically and in a mild form.

E. W. KEEGAN, M. D.,
Sec'y Montgomery County Board of Health.

MONROE COUNTY.

The health of this county for the past year has been unusually good. The sanitary condition of the county is fairly good. We have not had a scourge of any epidemic. Some cases of diphtheria, but not many deaths; the cases were scattered through the county. A number of cases of typhoid fever and several deaths therefrom; they have been scattered through the county. Quite a number of cases called typhoid proved not to be afterwards.

The public buildings, viz.: Court house, jail, poor farm, and school houses are in pretty good sanitary condition.

The physicians of the county are sending very meagre reports of deaths and diseases. Nearly all the birth reports are sent in, they being seemingly more desirous of having those reports on record than they are to have the death reports. The most that I do get come through reports of the undertakers, and I then hunt them down. There are some honorable exceptions. I think the penalties for not reporting should be more severe and better enforced.

Our public square is now in good condition. The new pavement next to hitching rack is swept every day, which, if continued, will do well.

A. J. AXTELL,

Sec'y Monroe Co. Board of Health.

MORGAN COUNTY.

Secretary State Board Health, Indianapolis, Ind.:

The sanitary condition of the county is reasonably good. The county asylum and county jail are in good sanitary condition. The school houses have all been renovated. Some have had new wells, so in all they have a good supply of water.

Fewer cases of typhoid fever this year than the one previous. Only six cases of death by typhoid fever. I do not think there has been a full report, for it seems impossible to get some physicians to attend to it as it should be. I hope that the law may be amended so that they will be compelled to report, for unless they do so, our reports are not full.

We have not had any epidemics of any contagious diseases, except scarlatina in a mild form at Brooklyn, which was strictly quarantined by me.

There have been handed in to me in the above time 85 deaths, 255 births and 179 marriages. By the report you will see that we have had three births to one death reported.

The County Board of Health is composed of men of intelligence, who seem to want to do all within their power to promote the health of the county. Hoping that this report will be satisfactory to you, I am,

Respectfully yours,

C. M. GRAVIS,

Sec'y Morgan Co. Board of Health.

NEWTON COUNTY.

The health of Newton County for the year ending September 30, 1897, has been in superlative degree good. No diphtheria; no scarlet fever and very few cases of typhoid. As to the cause of the fever, I have been unable to ascertain definitely, except in two cases. These were students at school in Illinois who became infected by drinking bad well water. Both returned to their homes in this county sick. One died and the other is convalescent. Phthisis is prevalent in a very moderate degree.

We have a large two-story, twenty-four-room poor house, well lighted, well ventilated and with a good artesian water supply. The housekeeping is perfect from garret to foundation. Halls, rooms and outhouses are kept scrupulously clean in all respects. The inmates, nine in number at present, are well cared for by a most excellent overseer.

The school houses of the county are all in good condition and supplied with deep-well water. Take it all in all, no county in the State can boast of better sanitary surroundings for the public schools, and no county can show a better health record.

Yours respectfully,

R. C. M'CAIN,

Sec'y Newton Co. Board of Health.

NOBLE COUNTY.

On December 13, 1897, the Noble County Board of Health visited the public buildings of the county, as required by rule No. 22 of the State Board of Health, showing the sanitary conditions.

The county asylum was the first for inspection. It is a two-story brick building, with a slate roof, built in 1870, and cost about \$20,000. It has recently been painted on the outside, which has greatly improved its appearance and will add to its preservation. The county farm is superintended by Henry Kirkpatrick, who has shown his ability and fitness for the position by the model of neatness of the buildings and their surroundings, and by the contentment of the inmates. The asylum contains 28 inmates—22 males and 6 females; ages from 22 to 85 years. Their sitting room is in the basement, which is also used for an eating room, the epileptic and feeble-minded eating in a separate room. The food furnished was good and well cooked. The health of the inmates for the year past has been good, no epidemic of disease of any kind having appeared among them.

We found where we believe several improvements could be made, and the lack of them is not the fault of the present Board of Commissioners, but rather the architecture of the building.

1. Better heating furnaces are needed, as the present ones (of which there are two) do not heat the halls or rooms of either story to a sufficient temperature to be comfortable or healthful. The rooms occupied in the second story are furnished with wood stoves.

2. The sitting room and sleeping rooms should be on the first floor for aged inmates. Quite recently a male inmate, aged 84 years, coming down the stairway from the sleeping room in the upper story, fell and broke

his neck. At present the basement is used for a sitting and eating room, the epileptics and feeble-minded sleeping on the first floor and all other inmates on the second floor, with a stairway giving a half-turn at both ends to reach it. The hospital room is on the west side of the hall on the second floor, and has good light and ventilation. The hall on the first floor is very dark, being poorly lighted even in the daytime.

There is only one bath tub in the whole building for males and females, and none provided for the Superintendent or his family, who must share the accommodation it affords or use an ordinary tub. We suggest better provisions be made for their convenience.

4. A system of water works and water closets within or near the building would add much to the comfort of the inmates, but this can not be done without great expense to the county, which we think would be an unwise expenditure of money at present.

The barn and other outbuildings are in good condition, giving ample room for the sheltering of stock therein. The herd of milk cows look healthy, showing no evidence of tuberculosis or other infectious or contagious disease. The milk is kept in a Peru zero refrigerator in the cellar; walls and ceiling whitewashed, floors kept clean, and presided over by the matron, Mrs. Kirkpatrick, who shares the confidence and good will of the female portion of the inmates. The water is furnished by a driven well about forty feet deep in the bottom of a dug well about thirty feet deep. We advised the filling of the dug part, for it is only about seventy-five feet from a privy vault, with the ground trend partially toward it, and it might pollute the water in the well. The drainage pipes and catch-basins are free of odor, and the building is in good sanitary condition.

The county jail is a two-story brick building, slate roof, built in 1875, and cost about \$25,000. It has water works and sewer drains. The wing part has two tiers of cells, and, until recently, was heated with wood stoves, but now with a furnace that keeps an even temperature, warm enough for the prisoners to take a bath in any cell, the bath tub being at the farthest end of the building. Walls and ceilings of cells and corridors whitewashed; bedding clean, with good ventilation, and every part kept clean and in good sanitary condition. The hospital room is in the second story of the residence part of the building, and is well lighted and ventilated. The basement, first and second stories are occupied by the Sheriff and his family. Here is an instance where prisoners are better provided for than their keeper. There is not a bath room or tub provided for them, the most essential convenience in every public or private residence. The building and premises surrounding are in good sanitary condition.

The court house was built in 1889 and cost about \$114,000. It is heated by steam, and in very cold weather there is not sufficient heat to make the rooms comfortable in some parts of the building. In the County School Superintendent's room a coal stove is furnished to give additional warmth. It is well lighted and ventilated; the water closets and drainage pipes are free from odor and every part kept clean and in good sanitary condition.

The County School Superintendent, Mr. Adair, informs me that the school houses he has visited, with few exceptions, are in first-class sani-

tary condition. In my duties as Health Officer I found one in Jefferson Township, District No. 8, an exception. I was called recently to quarantine a family with two cases of scarlet fever. One of them attended this school. The school house is a brick building 28 by 30 feet outside measure, with 14-foot ceilings. Daily attendance, 45. Every well-regulated dairy barn allows 800 cubic feet of space for each milk cow. Here is a school room, crowded with 45 school children, with less than 260 cubic feet of space for each child and teacher. The school house has been well washed inside and fumigated with sulphur during a vacation of ten days, and if any more cases occur we will order the school closed at once and better provisions made for the comfort and health of the pupils. I was told a few pupils in this school had scarlet fever last winter.

The public school buildings in Kendallville and Ligonier are kept in good order, and the privies and water closets of both are in good sanitary condition. The most flagrant violation of all sanitary laws and rules of boards of health is found in the building of a privy vault and water closet for the public school of Albion, which was done about two years ago at an expense of \$650. The school has enrolled 216 males, 198 females; 8 teachers—2 males and 6 females; daily attendance over 400. The privy vault has five urinals. One is broken and only four are now in use. The urinals are an iron basin 12 or 14 inches across, with an inch-pipe through the bottom leading to the vault below. Two of the basins are low for the small boys, but so located that they can not get to them without stepping in filth on the stone floor made by the older ones. Upon each seat was a deposit of filth, floor wet with urine, and the odor arising therefrom was disgusting. These are the accommodations provided for over 200 male children during school. No provisions made for the teachers, who can not leave during school hours, and must mingle with the children when occasion requires. This privy might do for a tannery, but as an example for school children to learn the principles of sanitation it is a total failure. In the basement of the building there is plenty of room for this vault, with good drainage, and where it could be flushed daily by the janitor from the water works, or a continual flow of water could be had that would prevent the odor from the urinal, and cost less money than the present one. The building is too small, particularly the number of urinals, for the number of children attending this school. It ought to be abandoned, declared a nuisance and better provisions made for the accommodation of the scholars.

There has been no epidemic of any disease in our county during the year past, at least none have been reported to this office. The facts and figures in regard to typhoid fever, diphtheria, scarlet fever, etc., I am unable to give, so few cases are reported. Had one case of cerebro-spinal meningitis reported. The cases of scarlet fever reported were fumigated with sulphur and the use of formaldehyde gas, with quarantines. This was the means employed to stamp it out, and was in every case successful. There was no hog or chicken cholera. The degree of prevalence of phthisis I am unable to state, by reason of so few cases being reported. With exceptions noted, all the public buildings, school houses and churches are in good sanitary condition, and the health of the public unusually good.

B. E. MILLER,

Sec'y Noble Co. Board of Health.

Alon. Jan. 1. 1898.

OHIO COUNTY.

In reply to yours of recent date requesting me to give the sanitary conditions of Ohio County, will say that I have within the last few days visited the county asylum and city jail; also all other public buildings in the city. I find them all in good sanitary condition.

I ascertained through Dr. E. S. Espey, our County Superintendent, the condition of our county school buildings and surroundings. He states that they are in excellent condition.

We have had no epidemics in our county the past year. A few sporadic cases of diphtheria and typhoid have been reported, but a strict quarantine in every case prevented any spread of the diseases.

The water supply for drinking purposes for Rising Sun is from cisterns and driven wells. There are probably fifteen of these wells of an average depth of 100 feet or over. The water from these wells is considered to be very pure and healthy. Our City Trustees have placed in the high school building covered tanks with large free-flowing faucets and small cups for drinking purposes.

Respectfully,

G. A. STEVENSON, M. D.,
Sec'y Ohio Co. Board of Health.

ORANGE COUNTY.

The health of Orange County for the year ending Sept. 30, 1897, has been very good.

The sanitary condition of the court house and jail has been good. But our county asylum is in bad condition, owing to the condition of the house. The main building is an old trap of a thing that is not fit to occupy, and the internal arrangement is such that it can not be ventilated. All ages and conditions are thrown together, so that the children have to associate with the old degraded paupers (for we have to acknowledge that many degraded characters find their way into the county asylums). I think our County Commissioners will build a new house the coming year. The location, surroundings and water supply are good. The Superintendent has done the best he could under the existing circumstances.

Our school houses in the county were all thoroughly washed and disinfected before the schools were opened.

Diphtheria has only been reported in three families during the year. Two of these families were living in old houses in which they had diphtheria last year. We kept it from spreading from any of these families. Two cases of scarlet fever were reported, both being imported from the northern part of the State by the families visiting here. It did not spread from either family. Very little typhoid fever has been reported, and no epidemics of it.

Physicians of the county are very negligent about sending in their health reports.

C. L. BOYD, M. D.,
Sec'y Orange Co. Board of Health.

OWEN COUNTY.

In my last report mention was made of an epidemic of diphtheria in the western part of the county, in Jefferson, Lafayette and Marion townships. The disease made its appearance in different localities and in practically isolated neighborhoods at about the same time. The disease was not recognized until a child died and a public funeral was held, when it spread with alarming rapidity. It became so general and in some instances so malignant that I quarantined all of Jefferson Township for a period of forty days, closing schools, churches and public meetings of every character. By these means and continued vigilance the disease was arrested, not, however, until many children had died from this preventable disease. In a public report of this character it is not expected that I should discuss therapeutic measures, but I can not refrain from saying that, especially in laryngeal cases, antitoxine was used with gratifying results. During August the disease made its appearance again, but in a milder form and in only one or two isolated communities. Fearing a repetition of last fall and winter's epidemic, Dr. J. N. Hurty, Secretary of the State Board of Health, on September 26th and 27th, visited the infected localities with me, and by immunizing those who were exposed and giving instructions as to hygiene, cleanliness, isolation and quarantine, but one new case has been reported since his visit.

My report will show 107 cases of diphtheria, with 19 deaths. It is needless for me to say that all or practically all of these deaths could have been avoided by prompt and intelligent complying with the instructions given by the attending physicians and Health Officers of the county. In some instances I was compelled to have an officer go from one infected house to another to compel those who were infected or exposed to infection to remain at home. Parents who had lost some of their children insisted that the disease was not "catching," and carried the poison to their neighbors' children on their persons and clothing. I do not know of one instance where physicians were the cause of carrying the disease to others, yet it took persistent work to impress upon some of the doctors the danger of carrying the infection unless they were exceedingly careful to change their clothing and disinfect themselves properly after visiting such patients.

My report will show 41 cases of typhoid fever, with 10 deaths. The cause, I am satisfied, in nearly all instances, could be traced to infected water. It is a reproach and a disgrace to have typhoid fever. It comes from drinking our own or some one else's ejecta. When our water and milk supplies are pure, this disease will cease. In some of the cases the eruption was so well marked as to resemble typhus fever. This was especially true in one of my cases, and also in one of Dr. Allen Pierson's, of this place. The eruption in these cases manifested itself during the first week of the disease, appearing very thickly all over the body, even on the face and scalp. These cases were malignant in character, the temperature frequently reaching 106 degrees. One died during the second week, the nervous system being overwhelmed with the poison, the other recovered after a long and dangerous illness. The eruption was not an erythema, but true rose colored spots, characteristic of typhoid fever. A small photographic view was taken of one which shows the eruption on

the abdomen, a fair sample of every other part of the body, the picture not showing the finer, but only the coarser spots. I herewith send you the photograph with the hope that it can be reproduced and shown in these transactions.



The statutes give the power of the State Board of Health to supervise the heating and ventilation of all public buildings. In the enforcement of this plain statute, I was instructed recently by the State Board of Health to see that its provisions were observed in the erection of all school houses being built, or to be built, in this county. Only two have been erected this year, one in Marion and one in Clay Township. In Marion Township, the Trustee, Mr. W. H. Penrod, put in the Smead System of ventilation and heating; this was done at practically the same cost as the old way, and this country school house is not only an honor to Mr. Penrod, but in its sanitary arrangement and convenience is the best country school house in the county.

The other trustee has so far refused to comply with the law in this particular and suit will be commenced at an early date to compel this officer to obey this plain statute so far as its construction is concerned.

Our jail is an old one and was constructed at a time when proper sanitation was not thought of in connection with such a building. It is cleanly kept. I need not add to what I said in my last report on this subject.

NATHANIEL D. COX, M. D.,
Sec'y Owen Co. Board of Health.

Spencer, September 30, 1897.

PERRY COUNTY.

In reply to yours of recent date relative to the sanitary condition of Perry County, can say that our county has been fortunate in not having any epidemic diseases during the last year.

Perry County had donated to it by the city of Cannelton a fine building, to be used by said county for a court house and county purposes,

and as to its sanitary condition there is nothing to be desired. The heating will be by steam, light by electric incandescent light, water from city water works, and plumbing best the city can furnish. The county jail will be heated the coming winter from the heating plant in the court house (steam), and as to the sanitary condition of the jail and cells, they are as good as can be furnished, the jail being almost new. As the number of prisoners confined therein is generally small, there is no crowding, even though the jail proper is quite small. The greatest trouble with the prisoners is to make them comprehend the necessity of personal cleanliness and to avoid the promiscuous spitting on floors of cells and corridors. Spittoons have been provided, but they persist in spitting around them. Because of the slowness or delay in receiving insane at the State Hospital, we have had several of these unfortunates confined for months in the jail, and the influence to both inmates have been harmful.

Our poor farm is in bad shape, but as the expenses of the county are exceeding our limit, the judge issued orders that none but the most necessary repairs be made to all public property, and so the poor house property can hope for little. The inmates are well taken care of and there has been no sickness to speak of among them. There have been several cases of typhoid fever reported in the county, and some of these were contracted in other places outside the county, the patients coming home to be treated. In every case the disease was limited to those places and no additional infections occurred. We have had considerable aestivo-autumnal fever cases, due to the dry spell and scant and bad water supply. The instructions issued by your Board for typhoid fever prevention, etc., were in these cases followed out. We have had no scarlet fever, diphtheria, smallpox or cerebro-spinal fever.

No epidemic diseases have prevailed among animals. Probably the usual number of hogs were lost by cholera, but as farmers have not made any request for investigation, nor direct report, nor complaint about losses, same cannot be definitely stated.

I am certain there has been no increase in the number of cases of phthisis or tuberculosis of all kinds from what has heretofore been the case, and at no time has our county been burdened with many of these unfortunates, but the peculiarity has been that where formerly we had cases running a protracted or chronic course they are now more acute or shorter duration of sickness. Perhaps this may be due to higher grade of civilization, resulting in lesser vital resistance.

Our report for births and deaths are in most instances made only on repeated request and threats, so that from this source we have the most contention, but hope that in time the implied gratuitous work of physicians will be less often heard and reports be willingly made.

One more matter I wish to call your attention to, and that is sending the county instructions, circulars, etc., by express companies. In most of these instances the county is required to pay 50 or 60 cents for packages which your office could send by mail for 5 or 10 cents, and we would much prefer to patronize the U. S. mail than other monopoly, and repay your postage you supply on mail matter.

Very respectfully,

CHAS. M. BRUCKER.
Sec'y Perry Co. Board of Health.

PIKE COUNTY.

The sanitary condition of Pike County is fairly good. We have had no epidemics during the year. We have had occasional sporadic cases of diphtheria and scarlet fever without any seeming connection from one to another.

Physicians of this county have been somewhat derelict in reporting births and deaths and contagious diseases, and they do not report cases of typhoid fever or meningitis. There has been some typhoid fever in the more hilly districts of the county, due, I think, to bad water supply. Where water has been used from artesian or deep wells, typhoid has not prevailed.

I find that the county poor asylum is in good sanitary condition, and the inmates are fairly well clothed and fed. I also have a report from the county superintendent that the school houses and outbuildings are in fairly good condition. I visited the county jail and found it in bad condition, but it has since been cleaned and put in good shape.

We have had about the usual number of deaths from phthisis pulmonalis, but I am led to believe from experience and observation that with due care in isolation of phthisis patients, disinfecting sick rooms, bedding and cuspidors, the mortality from this disease might be materially reduced.

Hog cholera has invaded some sections of the county, but not to the extent of former years.

I would say that we are using antitoxine here in diphtheria or membranous croup with good success.

J. W. COLEMAN, M. D.,
Sec'y Pike County Board of Health.

PORTER COUNTY.

In reply to your circular of October 20th, I send you the following report as gathered from personal inspection and physicians' reports:

First, in regard to the sanitary condition of the county buildings. The poor house is a two-story frame structure, old and heated very imperfectly by stoves. The water supply is from a well in the yard, with the privies or outhouses about eighty feet from the well. The soil a loose, sandy loam, surrounded by large marsh tracts of land. Neither an inviting nor healthy location. The need of sanitary improvement can be seen from the above statements. The court house and jail are handsome modern buildings, heated by steam and with good water, heat and sewage attachments.

The school buildings of this city are fully up to the times in the matter of rooms, heat and light, all having steam heat and city water supply, which latter is excellent and abundant.

There have been isolated cases of diphtheria throughout the county during the year, aggregating in all some thirty cases, and at present we have some four cases in this city. At Koutz, during the latter part of the summer I was obliged to close the schools and Sabbath school and

quarantine a number of families, and succeeded in stopping an epidemic after the death of three children. I think that outbreak and another in the northeastern portion of the county were directly traceable to infection from Lake and Laporte counties, in both of which counties they have suffered severely during the year.

At this town of Hebron in the southeastern portion of the county, a mild epidemic of scarlatina prevailed during September and October, from what cause or source of infection I am not able to determine.

Typhoid fever has not prevailed to any great extent, some nine cases being reported in the county; none, I believe, in the city of Valparaiso.

No small-pox and but two cases of meningitis during the year.

There is a smaller percentage of phthisis pulmonalis in this locality than for many years. The returns show nine deaths from that cause during the year.

Diphtheria gives us more concern than any other disease. One reason is the neglect of our irregular and eclectic physicians to report the cases and enable us to quarantine in time to prevent the infection spreading, and the neglect of many families to call a physician until the case is moribund and has infected all the neighboring children with whom it has associated. Such cases occurring among ignorant and careless people, who shield themselves from protection by such statements as "We thought he just had a cold," or, "He has had just such a throat lots of times," are the ones that handicap the efforts of the health officers to stamp out the scourge. I wish to give credit to all or nearly all the regular physicians, who, as a rule, report their cases promptly and assist the Board of Health in stamping out epidemics.

Yours truly,

A. P. LETHERMAN,

Sec'y Porter County Board of Health.

PULASKI COUNTY.

In answer to your letter to furnish a review of the sanitary condition of this county for the year ending September 30, 1897, I will say it is good. We have only had a few cases of contagious diseases, which were properly managed and kept within limits. A few cases only of typhoid and diphtheria and scarlet fever have been reported. When necessary, if the laws of health are endangered, measures governing the same are enforced. The sanitary condition of the jail, poor asylum and school buildings are all in good condition.

Yours truly,

J. J. THOMAS, M. D.,

Sec'y Pulaski County Board of Health.

REPORT OF SUPERINTENDENT OF SCHOOLS.

In answer to your letter to furnish a review of the sanitary condition of the schools of this county for last year, will say, as a general rule, it is good. It is true we have few wells and depend upon farmers to furnish water for our schools and in consequence the water is not always the best. In a few instances the grounds are not thoroughly drained. We have few, if any, vaults for our outhouses. In regard to the buildings.

we depend upon windows entirely for ventilation. As a rule our school buildings are too small and ceiling too low, not giving enough cubic air space to the pupils. Improvement can be made all along this line.

Yours,
J. H. REDDICK.

Winamac, Ind., October 29, 1897.

PUTNAM COUNTY.

During the last year the health of Putnam county has been fairly good. But one epidemic occurred of any serious proportions, which was an epidemic of diphtheria in the village of Mt. Meridian, a small town on the National Road eight miles from the county seat. The whole school had become infected and one death occurred before the disease was reported. That case was diagnosed as membranous croup and a public funeral held. I immediately went to the village and quarantined it, flagged all the infected houses and spent half of each day there for one week and stopped the spread of the disease. Our greatest trouble is with scarlatina. A great many of the cases are not reported, no isolation enforced and no quarantine observed, many of the patients returning to school while still exfoliating. I see no way to remedy it. Have been excluding pupils from school until the houses in which such cases occurred have been fumigated with formaldehyde. But many people and some physicians conceal the cases, and no report is made unless I hear them by accident, and then it is too late to thoroughly disinfect the premises. I issued a circular instructing teachers at the beginning of the school year in their duties in such cases, which see in Public Health Bulletin, and this year have done better than usual. But some teachers are afraid of becoming unpopular by enforcing it. But upon the whole it has done a great deal of good.

Respectfully,

G. M. BENCE, M. D.,
Sec'y Putnam County Board of Health.

Greencastle, Ind., January 25, 1898.

RANDOLPH COUNTY.

In reply to your letter of October 20th, I will attempt to give you as correct an account of the sanitary condition of Randolph County as it is possible for me to give. The sanitary condition of the county is good; in fact, in speaking to the physicians from different parts of the county they are nearly sure to make the remark that "It is alarmingly healthy." The people of the county are progressive and all seem willing to help carry out any sanitary law or rule given them. They all seem to think that it is a duty they owe to assist the health officer to prevent the spread of disease. They know the necessity of a strict adherence to the laws of health and endeavor to follow them as nearly possible as they can do.

We have had no epidemics in the county that have amounted to anything. The following is the list of contagious diseases reported for the last year:

	1896.			1897.								Total.	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.		Sept.
Diphtheria	2	6	5	20	3	3	1	2	9	5	4	5	63
Scarlatina	2	6	4	3	3	.....	1	.....	1	.....	4	1	20
Measles .....	.....	.....	.....	.....	.....	.....	4	2	1	.....	.....	.....	11
Whooping cough .....	.....	.....	.....	.....	.....	.....	.....	1	8	.....	.....	.....	9
Typhoid fever	3	9	.....	.....	.....	.....	.....	.....	.....	7	4	6	29
Total	5	21	9	23	6	3	6	5	18	12	12	12	132

Deaths from consumption, pneumonia, diphtheria and typhoid fever are as follows:

	1896.			1897.								Total.	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.		Sept.
Consumption	5	2	3	1	6	3	4	4	1	4	.....	2	35
Pneumonia	1	.....	2	9	3	.....	2	2	.....	1	.....	.....	20
Diphtheria .....	.....	.....	1	2	.....	.....	.....	1	.....	2	1	.....	7
Typhoid fever	3	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	6
Total	9	2	8	13	9	3	6	7	1	7	1	2	68

Of 132 cases of contagious or infectious disease reported there were only 13 deaths or a fraction less than 10 per cent. Of the total number of deaths reported, 244, a fraction over 14 per cent., died of consumption. The bacilli of phthisis stalks abroad in our land and there seems to be no abatement of the dreaded disease, although as science advances and our experimenters become more numerous and bold I believe we can, through proper legislation and education of the masses, be enabled to reduce the per centage of throat and lung diseases to a minimum.

The physicians of this county are courteous gentlemen and progressive in their profession. Although our medical society is small in number, yet we accomplish great good. The petty jealousies of the fraternity is less here than other communities. The physicians, whether regular, eclectic, homeopathic or physio-medical, all seem to take an interest in assisting the health officer to perform his duties. They are at times careless in reporting deaths, because they claim the distance has been too great for them to make a special trip, and they do not get to see any member of the family for several days so that they can get the proper return. In births the physicians take the return at the bed side, but often forget to send in the reports until after the quarterly report is sent to the State Health Officer, and the first month of the next quarter is not correct in every instance. In the reports of deaths the physician should be prompt in sending to proper health officer. The secretaries are finding out the

value of the mortuary records, especially when the pension department calls for a transcript, and in case of life insurance and accident insurance companies.

There was an outbreak of diphtheria in the west part of the county during the months of December, 1896, and January and February, 1897. The families were quarantined and schools closed until the disease subsided.

The sanitary condition of the school houses of the county is good. Water supply to one-third of the school houses is from driven or drilled wells. The elevation of the school houses is good, as is also the drainage. At a number of school houses the water is carried in buckets from neighboring farms. The outbuildings are remote from the wells and school houses. There are no vaults. The outhouses are frequently scrubbed with soap and water and kept in a fair condition. The interior of the school houses is kept in a good sanitary condition and disinfected frequently. Ventilation and light good. Heated in winter by stoves.

There have been no cases of smallpox or cerebro-spinal meningitis reported.

There has been, in different parts of the county, a considerable amount of hog cholera and chicken cholera. The cause of the outbreak is unknown.

The court house is in a fairly good sanitary condition.

The jail is not in extra sanitary condition. The system of closets is not up to the standard. The ventilation is fair. The heating is not good. The prisoners contract cold easily. The jail is kept fairly clean. Disinfectants have been ordered to be used in all parts of the jail two or three times each week.

The county infirmary is in good sanitary condition. The superintendent informed me that there had never been a case of typhoid fever on the farm. There have been no contagious or infectious diseases in the last year. There have been no cases of pneumonia or bronchitis within the year. There are fifty inmates on an average at the infirmary. Within the year there have been eight deaths, five males and three females. They died of paralysis or epilepsy. Water supply from drilled well.

The sanitary condition of the orphans' home is good. There have been an average of seventeen children, males and females almost equally divided. There has been no contagious or infectious diseases in the home in the last year. Water supply from springs.

Union City is the only town in the county having a system of water works. Dr. Wm. Commons informs me that there has never been a case of typhoid fever among those who have been using the water supplied by the water works. The only cases of typhoid fever reported from Union City were of persons who used water from dug wells.

Very respectfully,

F. A. CHENOWETH, M. D.,
Sec'y Randolph County Board of Health.

RIPLEY COUNTY.

Replying to your request for a statement containing a sanitary condition of Ripley County I may say that while there has been great improve-

ment along the lines of sanitation there is still room for much more improvement. What the people most need is education along the line leading to a proper understanding of the causes of infectious diseases and methods of prevention.

Diphtheria has prevailed in six townships in the county during the summer and fall months, and it has been extremely hard to eradicate it. Although strict quarantine has been enforced and thorough disinfection with formaldehyde gas and the other well-known germicides used, it still appeared from time to time in different localities. Children have been attacked who were several miles from any case and who had not been from home, nor had anyone known to have been exposed with them. The disease has been quite severe, but the death rate very low, about 5 per cent. where antitoxine has been used, while before antitoxine was used the mortality was about 30 per cent. At this time there seems to be a complete cessation of the disease.

A number of dairies in the county have been inspected and some improvements made in their condition, which, I think, makes them all that is desirable in a clean, healthy dairy. The cows are fed on good pure food, have good water to drink and they are fat and healthy to all appearances.

The county infirmary and jail are in good condition.

Yours truly,

R. T. OLMSTED, M. D.,
Sec'y Ripley County Board of Health.

RUSH COUNTY.

The sanitary condition of Rush County is good. We are now just completing a new court house and jail, both heated by steam and well supplied with hot and cold water.

Our poor house is well kept.

Our country school houses are nearly all brick and most of them have deep tubular wells. Our school trustees have complied, as nearly as possible, to the rules and regulations adopted by the State Board of Health concerning the public schools.

Number of cases of typhoid fever, 36; deaths, 20. Cases scarlatina, 25; death, 1. Diphtheria, 8; no deaths. Number of deaths from phthisis, 17.

In contagious and infectious diseases our physicians all report promptly and use all precautions to prevent the spread of epidemics.

LOT GREEN, M. D.,
Sec'y Rush County Board of Health.

SCOTT COUNTY.

The following is as near a correct report as it is possible to give, as we have had no secretary to keep records for the past six months.

The sanitary condition of the poor house is of the very best, with few exceptions. The drainage around the house could be better, as it allows the water to remain on the ground at the north wing of the house, thereby causing damp rooms.

The condition of the jail is almost the same. The privies and waste sewers are not of the proper size to allow the refuse to pass away, as they become stopped very easily.

The condition of the school houses is better than for years. The worst thing we have to contend with is ventilation, there being so few teachers that seem to understand how to ventilate their rooms properly.

We have had but one epidemic in the county during the past year, that was during the months of May and June, 1897, it being one of pertussis, and it was general throughout the county.

The list of diseases is as follows: Typhoid fever, 10 cases (bad water); diphtheria, 2 cases (not known); scarlet fever, none; smallpox, none; cerebro-spinal fever, none.

The degree of prevalence of phthisis seems to be on the increase with the young people of our county between the ages of 16 to 20 years.

T. C. SARVER, M. D.,

Sec'y Scott County Board of Health.

SHELBY COUNTY.

As secretary of the Board of Health I beg leave to submit the following report of the sanitary condition of Shelby County for the year ending September 30, 1897:

During the past year the general health has been as good as usual. There has been no epidemic of any disease. A few cases of scarlatina have been reported, but it seems to have been a very mild form; no deaths having been reported from that cause. Measles have been very rare. A few sporadic cases of diphtheria have been reported, and antitoxine was used in some of them, but those treated without antitoxine made quite as speedy recoveries as those treated with it. However, I am disposed to doubt the correctness of the diagnoses.

During the year the county has been free from smallpox and cerebro-spinal fevers, and typhoid fever has been very rare.

The prevalence of tuberculosis in Shelby County is alarming.

Hog cholera has existed in a limited degree during the hot weather.

I consider the sanitary condition of the county jail and poor house above the average and that of the court house first-class. While I do not claim the condition of all public buildings is perfect from a sanitary standpoint, I am not prepared at present to offer any suggestions for improvements.

The following is the report of the county superintendent of schools:

"The sanitary condition of the schools in general is good. In visiting schools I notice that certain teachers are very careless in regard to ventilation but I remedy this in every case. In several districts the land around and under the school building is very poorly drained but I am glad to state that this condition is being made better every year. The

trustees in the majority of the townships have oiled the floors in every school house, which, I think, materially better the sanitary condition in such townships. In every case that came to my knowledge during the year, school trustees have given to school property deep wells which were bored by steam power. These wells have been put to a great depth and cased, thus avoiding surface water. Although the arrangements of our school premises are not perfect in sanitary respects, yet with the improvements which I noted going on, I think that in a short time this county will be in the lead.

Respectfully submitted,

"J. W. BARLOW,

"County Superintendent Schools."

Humbly begging the pardon of the State Board of Health for any inconvenience caused by my delay in reporting, I am,

Very respectfully,

J. B. STEWART,

Sec'y Shelby County Board of Health.

STEUBEN COUNTY.

In reply to your letter asking for a sanitary report from this county, will say that the general health of the people and the sanitary condition of the county at the present and during the year ending with September 30th, is probably as good or the best in its history.

A thorough inspection has been made, including public school buildings and their grounds, of which the county superintendent of schools, Homer Dilwarth, says: "While visiting the schools of the county during the last school year, I paid strict attention to the sanitary condition of houses, grounds, etc., noting the method of ventilating and lighting, the condition of the outbuildings and the water used. I find conditions materially improved over those of a year ago. Trustees and teachers all express a willingness to conform to the rules of the Board of Health."

The infirmary, jail and county buildings are all in a good state, being clean, well kept, ventilated and drained as well as conditions will permit, especially so in the infirmary. The inmates are contented and well supplied with things needful for their comfort and health. Considering their number, age and infirm condition, they have been remarkably healthy. No sickness except a severe epidemic of dysentery during the hot months, with source of infection not known.

But for the usual diseases incident to childhood there has been nothing of importance. Some few scattered cases of typhoid fever, three cases of scarlet fever and one of diphtheria, each and all in themselves so scattered as to suggest no source of infection. All infectious and contagious diseases that came to the notice of the Board have been mild in character. The usual precautions have invariably been carried out when properly and promptly brought to the notice of the Board of Health.

I would suggest to you that all undertakers in the county be compelled to obtain a burial permit from the proper health officer before making interments within the county. This would assure correct death re-

turns and above all prevent public funerals where parties have died of contagious diseases. It is an occasional but sad thing to hear of such funerals in any community and know what might and frequently does result from such, as frequently the undertaker does not know the cause of death. Such regulation would prevent the spread of disease, and save much suffering and death. I am convinced that it is high time that some definite action be taken on this question.

W. H. LAVE,

Sec'y Steuben County Board of Health.

Angola, October 29, 1897.

SULLIVAN COUNTY.

At the request of the State Board of Health I submit the following report as to the sanitary condition of Sullivan County, with an account of the mortality from typhoid fever, diphtheria, scarlet fever, smallpox and cerebro-spinal fever, as they have prevailed in this county for the year previous to November 1st, 1897; also a report of the sanitary condition of the jail, county infirmary and public school buildings:

The jail is a neat and modern structure, having been built but a few years. It is provided with a furnace for heating with steam, and supplied with water from the city water works. Everything is in tip-top shape and kept that way by Sheriff Mayfield.

Our county infirmary building was built one year ago. It is large and well ventilated—not a room in the building but can be opened to outside air. Heated with steam and furnished with bath tubs, water closets and everything found in an up-to-date building of that kind.

The court house is old but kept in a good sanitary condition.

As regards infectious and contagious diseases we have had no outbreak or epidemic of any disease within the present year, although we have had some isolated cases of contagious diseases in different parts of the county.

Measles were scattered promiscuously over the county during the months of January, February and March, 1897, none proving fatal unless complicated with some other trouble.

Typhoid Fever.—There have been ten fatal cases of typhoid fever, none except fatal cases being reported.

Diphtheria.—There have been 13 cases, with two deaths, during the year. Most of them have been within the months of September and October, and scattered promiscuously over the entire county, with no history that would lead to a previous case.

Scarlet Fever.—There were 10 cases, with 2 deaths, from this disease the past year.

Smallpox.—There has been no smallpox in this county during the year.

Cerebro-Spinal Fever.—There were two cases in the county to my knowledge, and both were fatal.

All cases of infectious or contagious diseases have been quarantined. and no outbreak or spread from previous cases has occurred in any instance. The physicians in general are willing and ready to do all in their power to prevent an outbreak or spread of any disease.

During the year there have been 215 deaths from various diseases and causes. From consumption there were 23 deaths or nearly 11 per cent. of the total.

Hog cholera has not prevailed to any extent in this county during the year. Neither has there been an epidemic disease of any kind among any of the stock to my knowledge.

Yours truly,

JAS. M. BILLMAN,
Sec'y Sullivan County Board of Health.

CONDITION OF THE SCHOOL HOUSES.

Sullivan County has 116 school houses, and about 75 per cent. of them are supplied with wells. The ventilation is all done by means of the doors and windows. So far as I know all of the houses have either blinds or shutters over the windows where necessary. All the houses are supplied with outhouses for each sex, and they are located away from the houses and as far apart as can be.

The heating is all done with stoves except three buildings.

Very respectfully,

RICHARD PARK,
Superintendent Sullivan County Schools.

Sullivan, November 9, 1897.

SWITZERLAND COUNTY.

In reply to your recent communication will state that Switzerland County has been free from epidemics during the past year. The sanitary condition of our county is good, and it is a source of gratification to note the increasing interest of our county officials in matters pertaining to the general health. Our school buildings were thoroughly cleaned and disinfected before school opened. The outbuildings also received proper attention. The court house, jail and county poor house are carefully looked after. Enclosed you will please find county superintendent's report.

Yours truly,

J. W. SMITH,
Sec'y Switzerland County Board of Health.

COUNTY SCHOOLS.

In reply to your recent interrogatories of or relating to the health of the school children of this county and the sanitary condition of the school houses and surroundings, would respectfully report that all the schools in the county are in session, most of them having begun more than one month ago, and up to the present time there has not been a single case of diphtheria, membranous croup, scarlet fever, whooping cough, measles or other communicable disease reported. I have no knowledge as to health conditions in Vevay City, as the city schools are not under my supervision. Immediately before the opening of the school our township trustee caused a general cleaning and disinfection of the school

houses and school furniture. The heating and ventilating facilities are good; the water supply, so far as I am able to learn, is pure and wholesome, and the children healthy and happy.

But would beg to make one suggestion, i. e., that all teachers should be required to furnish the trustee, at time of contracting to teach, a physician's certificate (based on a physical examination) of evidence of successful vaccination and that teacher is free from tuberculosis or other disease.

Respectfully, etc.,

D. N. HAYDEN,
County Superintendent.

Vevay, Ind., November 1, 1897.

UNION COUNTY.

Union County has been for the past year exceptionally free from epidemics of any kind. While the general sickness has been somewhat above the average amount, the per centage of deaths has been unusually small.

Typhoid fever has prevailed in some localities among a few families, which, in all cases, was attributed to impure water, and which was corrected in all instances by the attending physicians whose hearty support the Board of Health fully appreciates.

Some few cases of scarlet fever have been reported, and were immediately quarantined by the proper city health officers or some one authorized to so do.

Phthisis has not claimed its usual number of victims, and greater care has been manifested by the physicians in attendance to preserve proper hygienic conditions.

The public buildings are a pride to the county, and the commissioners have used exceptionally good judgment in keeping them in good repair and placing proper persons in charge, fully competent to maintain a high grade of regimen and sanitary conditions.

The township trustees have endeavored in the erection of new school houses to secure the very best location possible for the same and to place all modern improvements for the comfort of the scholars, special attention being given to the securing of good water and to the keeping of such by the annual cleaning of the wells. The most difficult question to solve has been the keeping of clean outhouses, but by using the dry earth system former difficulties have been remedied. A vast majority of the school buildings are of brick, and it is expected that within a short time all the school buildings of the county will be of the same material.

Very respectfully,

A. D. HAWLEY,
Sec'y Union County Board of Health.

VANDEBURGH COUNTY.

In compliance with your request of October 20th the following is submitted:

The county infirmary is kept in excellent condition, cleanliness and kind treatment to the inmates being had to a very unusual extent. The

sanitary condition of the court house is first-class. The jail a splendid building, needs better water facilities, which have been considered and will be soon added.

The county superintendent reports all school buildings in good sanitary condition. The order from the State Board came too late to be put in execution this fall, but it can be carried out next summer. He reports no smallpox, diphtheria, scarlet fever or typhoid fever in any of the schools in the county.

About the usual number of cases of diphtheria and scarlet fever have prevailed in the city with only a few cases of measles and cerebro-spinal meningitis. The usual large mortality from tuberculosis has occurred, and I presume will continue to do so until we are sufficiently progressive to eradicate all sources of infection. Recently a herd of milch cows supplying milk to the residents of this city was subjected to the tuberculin test and 4 out of 40 of them proved to have the disease, as demonstrated by autopsy. While such a condition as this is permitted, is our mortality rate from this disease to be wondered at?

Very truly,

JOSEPH C. McCLURKIN, M. D.,
County Health Officer.

VIGO COUNTY.

The sanitary condition of all public buildings in Vigo County is excellent, the jail alone being the only doubtful one. The management of that is good and everything done that is possible to keep it clean and well ventilated, but it is too small to meet the requirements of the county. Prisoners have to be crowded together in the cages and corridors when all the cells are full; there is no convenient place to take care of the sick, and no good way of keeping the well from getting sick.

The poor asylum is a model of neatness, good healthy sanitation, good ventilation and abundance of pure water.

The school houses of the city of Terre Haute are all in first-class condition, no pains having been spared to place in them all modern equipments for heating and ventilating. Proper attention has also been given to the care of the vaults and to seeing that the water supply is adequate and pure. The schools throughout the county are equally as well taken care of as far as it is possible. The report of Chas. F. Grosjean, County Superintendent of Schools, which will be found below, will explain more fully their condition.

The general health of the county for the past year has been very good; in fact, better than for several preceding years, the death rate not being as large as last year. Of contagious diseases there was reported during the year 54 cases of diphtheria, 291 cases of measles, 24 cases of scarlet fever and one only of typhoid fever. Deaths reported from contagious diseases are as follows: Twenty-two from diphtheria, 1 from measles and 17 from typhoid fever (showing typhoid fever had not been properly reported). Then follows the list of deaths from phthisis pulmonalis, numbering 78, one more than occurred the previous year. Total number of

deaths in the county for year ending September 30, 1897, was 563. Reports have been made more fully from all parts of the county this year than heretofore, still there is a grand opportunity for improvement, and I intend to watch closely those failing to make prompt reports during the coming year, especially those who neglect typhoid fever. Under the new law I can not understand why reports should not be full and complete or the offending parties prosecuted.

Texas fever was scattered over the greater part of the county about the first of August by a large herd of cattle that was purchased in St. Louis and shipped here. It was necessary to divide the herd so as to enable the owners to obtain sufficient pasture. After about three weeks animals in the pasture with the affected cattle and those in adjoining pastures began to get sick, and I ordered an investigation, which was made by Dr. T. B. Pote, V. S., of this city. He found nearly all the native cattle that had come in contact with the imported cattle to be affected with Texas fever and literally covered with the *Borophyllis bovis* (or Texas fever tick). Quarantine was established and maintained as best we could, but it was only by the appearance and effects of the first frosts that any abatement was noticeable in the disease, and the result is I have heard of no more deaths lately, and I expect the disease has disappeared for this year. About 700 head were affected and nearly 50 head died. All the deaths were among native cattle. The imported ones apparently were but little affected by the disease. No other infectious diseases have appeared among the animals of the county during the year.

Very respectfully yours,

JAMES R. WILLIS.

REPORT OF COUNTY SUPERINTENDENT.

A partial inspection of the schools of this county warrants me in making the following general statements concerning their sanitary condition:

The majority of the houses are built on the same general plan, i. e., one-story frame, door in the end and three windows in each side; children seated so as to face the end opposite the door.

The only provision for ventilation is by means of the door or windows, which are not generally used, the result being that pupils are frequently compelled to endure foul air during a large portion of the day.

The heating is done by means of coal stoves, and, as no shields are provided, the children near the stove often suffer from the intense heat.

The water is generally obtained from neighboring wells, carried in buckets and drank from tin cups used in common.

Slates and pencils have not entirely disappeared, but progress in disposing of them is rapid.

The Trustees are earnestly laboring to place the houses and surroundings in better sanitary condition, but lack of funds and a long-established indifference, together with the absence of the necessary information, seriously retards improvement.

Our schools have been free, for the most part, of epidemics.

In one district scarlet fever and in another diphtheria interfered with the school for a short time.

Trusting that the above general observations on the sanitary conditions of our school will be sufficient for your purpose, I remain,

Respectfully yours,

CHAS. F. GROSJEAN,
Supt. Vigo Co. Public Schools.

Terre Haute, Dec. 24, 1897.

SANITARY SURVEY OF WABASH COUNTY.

Wabash County is situated in the northern and eastern part of the State. The surface is sufficiently rolling to carry off surplus water and give good drainage. Four rivers pass through the county—the Wabash, Eel, Salamonie and Mississinewa—giving outlet for all surplus water.

There are two towns in the county that are supplied with water works, namely, the cities of Wabash and North Manchester. Both of these places are supplied from flowing wells, and the character of the supply is above suspicion.

The soil of the county is an alluvial deposit overlaying limestone beds. On the rivers Wabash, Salamonie and Mississinewa the limestone crops out in the river bluffs.

The general water supply of the county, except as above stated, is from wells.

The general health for the past year has been above the average. There have been no epidemics in the county, except slight ones of measles, chicken-pox and whooping cough in the city of Wabash. We have had some diphtheria, with an occasional death, but owing to prompt quarantine and the use of antitoxine the deaths have been rare.

The Township Trustees have been prompt to follow the suggestions of the State Board of Health in regard to all sanitary regulations of schools and school houses. The town boards have been likewise diligent in this direction.

The city of Wabash has, within the last two years, put in a very thorough system of sanitary sewerage, to which the only objection that can be raised is its emptying into the Wabash River.

Typhoid fever has been much less frequent in the county than ever before; and this good result is owing, I believe, to the general information disseminated, making the people understand its source and prevention. Indeed, I think we have one of the most intelligent and healthful counties in the State.

Very truly yours,

J. H. FORD,
Health Officer.

WARRICK COUNTY.

Regarding the sanitary condition of Warrick County, I may say that it has been good for the year ending September 30, 1897, with the exceptions diphtheria, scarlatina and typhoid fever. These diseases, however, were

light and very few deaths resulted. Our public buildings are in good condition and the health has been good in the poor asylum and orphans' home. The jail is in good condition.

Very respectfully,

H. W. SCALES,

Sec'y Warrick Co. Board of Health.

Boonville, Ind., Sept. 30, 1897.

WASHINGTON COUNTY.

Owing to the negligence of the physicians of our county in making out their quarterly reports, I am unable to give a correct report of the sanitary condition of the county.

The county poor house, in charge of Mrs. Cavanaugh since her husband's death, contrary to any report unofficially given, is in as complete sanitary condition as is possible to make it. Situated upon high ground, not near a water-course, its buildings painted plainly, its grassy lawns with well-kept beds of flowering plants, its neatly trimmed orchards, well-kept and splendidly arranged outbuildings, all present to the close observer as healthy a spot as can be located in Washington County. The inmates are well clothed and well fed, and their sleeping apartments are all that could be desired. The rooms are given a coat of whitewash at least twice a year, are scrubbed often, and no accumulation of dirt or filth is ever found in any part of the house. No disease of a contagious nature has occurred here the past year.

The county jail is a stone structure and one of the best in the State, and, as far as the sanitary condition is concerned, it is as good as can be expected of such places.

The county court house is a model of beauty, and, under the splendid care of the present janitor, Mr. Chas. Jackson, its condition ranks second to none in the State. As to its sanitary condition, cleanliness seems to be the janitor's pride in placing our court house in perfect condition.

As regards diphtheria, we have had one case to result fatally, and several suspicious ones, that, under proper medical treatment, proved only mild suspects. The cause of this one case is unsatisfactory, as the period of incubation followed from a gathering or picnic held at the fair grounds, but only the one case was reported. Prompt measures were taken by the health officer, and no cases resulted except in the family. No smallpox, scarlatina nor cerebro-spinal fever reported or heard of as yet. Typhoid fever is usually prevalent in Washington County, and this year has proved no exception, although the cases are not reported; yet I know from interviews I have had with physicians, nurses and undertakers that there have been a number of cases in different parts of the county, especially on what is known as Rush Creek and Buffalo Bottoms. The water supply is furnished from wells into which the surface water drains, and usually this is the source of infection. Early in the spring the rains flushed these bottoms, and since then water has been very low, seemingly to have retained the typhoid germ and spread its virulent action throughout these neighborhoods. Typhoid has been noted in these parts

of the county for years, and has proved a menace to the efforts of the health authorities. If the physicians of the county would unite and put forth their efforts and assist the Health Board of the county, we could allay this dreaded disease to some extent, and not until the physicians do this can we hope to stamp out a disease so common and so disastrous in its results. Combined action, harmony and strong force against any disease is the only means of combating it successfully, check outbreaks, prevent its spread and stamp it out of existence. United action alone will accomplish this result.

No diseases, as cholera, among animals yet reported to this office.

Phthisis is common only among those persons who have inherited the tendency. None contagious has yet been reported.

Washington County can be placed in better condition, from a sanitary standpoint, than it is now, but it will take the united efforts not only of the health authorities, but of the physicians and the general public. The Board of Health must be active and in close communication with the doctors of the county if it succeeds well in allaying contagion of the various diseases with which it comes in contact.

I have given the condition of the county as well as I have the means at my disposal to so do, and will in the future attempt to remedy any defects that may occur.

Yours truly,

H. M. PAYNTER, M. D.,
Sec'y Washington Co. Board of Health.

SANITARY CONDITION OF THE COUNTY SCHOOLS.

In the main the school houses in Washington County are in good sanitary condition. Most of the township and town trustees had the floors scrubbed and the desks cleaned before school began. Nearly all the towns and villages are using covered tanks for water. Paper tabs have been substituted for slates in perhaps one-quarter of the schools of the county. Few, if any, of the houses have satisfactory means of heating and ventilation. The fresh air enters farthest from the heating surface, and no adequate means is provided for the escape of impure air. Nearly every house is now provided with a good thermometer. One house in Monroe Township is entirely too small for the purpose, and is, I understand, in very bad sanitary condition. This, I learn, will be replaced by a new one next year. Privies are provided for many houses, but many more are needed, and some very seriously. The privies on the school lot at Little York are worse than hog wallows. It is impossible to get into them clean, or even near the door without great care. The principal teacher joins me in desiring the State Board of Health to look into this matter. Some school houses have numerous cracks in the floor, large holes in the plastering and window lights out.

Trustees continue to build new houses on the old site without regard to its sanitary condition. Hence some of our houses are in low, wet, muddy places, badly infected with malaria. Window shades are needed in several houses to protect pupils' eyes.

The greatest general need in this county is better heating and ventilation, so that pupils will not sit all day shivering, with wet feet, or listless from impure air.

S. H. HALL,

Supt. Washington Co. Public Schools.

Salem, Ind., Nov. 4, 1897.

WAYNE COUNTY.

The Wayne County Infirmary is situated on the western border of the Noland's Fork Valley, half a mile from the stream, seven and a half miles west of Richmond, on dry, slightly elevated ground, with a salubrious environment. There are three substantial two-story brick houses. The main large building, facing south, is occupied by the Superintendent and family, and, in annexes, some selected paupers. To the north of this, on the west side of a court and facing it, is the double house for males, one side of which, on both floors, is divided into small rooms for one occupant, those on the lower floor having automatic dumping water closets for a particular class. This building is old, heated by stoves, not well-planned for ventilation or its present uses, but by intelligent and diligent supervision is made to do good service.

On the east side of the court is the house for females, a modern structure, well arranged and water-heated, with a series of small rooms with dumping water closets for a particular class. One part of this building is made into a well-conceived and finished kitchen and dining room.

Good water is piped by gravity from high ground three-quarters of a mile west to an ample covered reservoir on a knoll a few hundred feet from the building, of sufficient elevation to afford fire protection, from which it is again piped by gravity to supply the buildings for domestic purposes, including bath rooms and water closets in all the houses. The sewage is piped a suitable distance (to the edge of the plateau on which the buildings are erected) and discharged into one of a pair of cemented reservoirs filled with straw. Passing under the straw the solid part of it settles and mingles with the straw, while the fluid, when it fills the reservoir, flows over, a clear, odorless liquid. In six months the reservoir is filled with a soft pulp of sewage and decomposing straw, and the sewage is then turned into the other straw-filled reservoir, the filled one being allowed to dry, which it does sufficiently in six months to be used as a farm fertilizer.

An inspection of the Wayne County infirmary leads me to the conviction that its inmates are probably the best-served paupers in Indiana. They are clean and humanely treated and while the house for males is not the best, it and all the others are kept in good sanitary condition and properly supervised. The supplies of food are sound and stored as if for family use, and everything is in order and arranged to gratify good taste. Even the court inclosed by the houses, where not used for passages from house to house, is occupied by neat, well-kept parterres of beautiful, refreshing flowers.

The county jail is a substantial two-story brick structure, facing the east. The front building, occupied by the Sheriff and his family, is of good appearance and kept in good sanitary condition. The prison proper adjoins the west wall of the front building; is of brick about 35 by 50 feet; the west part a steel-lined room about 44 by 35 feet, with 16-foot ceiling. A corridor 8 feet wide is cut off next to the front building by stout round iron bars from the floor to the ceiling. Back of this is a double tier of 10 steel cells, back to back, each cell 5 by 7 by 8 feet, with a grated door, and containing two berths. The cells face north and south, and the room is lighted by eighteen barred $2\frac{1}{4}$ -by-5-foot windows, eight on the south and two on the west admitting sunshine, and all afford ventilation when the glazed sash are open. These windows are 8 feet from the floor and are the only means of ventilation of the great steel box. At the west end of the double tier of cells are four rooms 11 by 3 by 8 feet, designed for bath rooms, water closets and urinals, one for each set of cells. These rooms are not now used for bathing—fresh tramps and their habiliments are purified in the basement, and other prisoners have towel baths in open spaces beside the stack of cells. The rooms are in bad order, the plumbing is old and defective, the down pipe from one room leaks the sewerage onto the cement floor in the cellar, from which the air is drawn to supply the prison. The leaky condition of the defective plumbing is of recent origin and work is about to begin to remodel and refinish the entire bathing and water closet outfit.

The prison is warmed by a furnace which takes its cold air from the cemented cellar under the prison, generally in good order, but just now contaminated by leakage from the water closets. The cold air should be taken from the outside, not a difficult thing to do as the plant is arranged. The heated air is admitted to the prison through a large grated opening in the floor of the corridor, where the prisoners not confined in their cells spend most of their waking hours, and although strictly forbidden to do so some of them sometimes eject their saliva, all the more abundant and offensive from the free use of tobacco, into this tempting and convenient spittoon. The hot air ascends directly to the ceiling of the steel box and diffuses over it without hindrance, with the result in cold weather, with the windows closed, that the upper gallery and cells are almost insupportably hot while the prisoners on the floor of the corridor may be suffering with cold. This unsatisfactory condition of heating the jail can not be remedied with the building in its present form. This is the prison for males, and while the building is badly planned and in unsanitary condition, it is janitored with discretion and industry and there is no acute disease among the prisoners.

The prison for females is a special annex to the Home for the Friendless, is fairly well planned and built, is supplied with plenty of good water and modern conveniences, and is kept in a sanitary condition by the authorities of the Home under the general supervision of the Sheriff.

The court house is a new, large and elegant building, provided with up-to-date methods of lighting, heating, ventilation and drainage. The water closets are kept clean and properly treated with a proprietary disinfectant ordered by the commissioners, which is at least a good deodorant. The entire building is in approved sanitary condition and is well janitored.

The County Superintendent of Schools writes me as follows:

"There are ninety-five county school houses in Wayne county, eighty of which are provided with modern methods of ventilation, the remainder by windows. Especial attention has been given to the lighting and seating. Many school yards have been underdrained. The school buildings are thoroughly cleaned each vacation and a disinfectant used each week. Trustees have given special attention to the wells and pumps, using every means to insure pure drinking water. All school grounds are furnished with two water closets. Whenever contagious diseases make their appearance in a school in such manner as to expose the school a vacation is immediately had until such time as all danger from the exposure will have passed. All pupils affected must bring a physician's certificate before they are admitted. What I have said of the country schools is equally applicable to the town and city schools.

"Respectfully,

"W. E. WINEBERG, County Superintendent."

Wayne County has had no epidemic or unusual ill health during the year, except a mild form of scarlet fever along its entire northern border covering several months, not, however, reaching the gravity of an epidemic, and an outbreak of typhoid fever in Richmond near the close of the year of short duration and average mortality.

The reported cases and deaths of the leading communicable diseases during the year are:

	FIRST QUARTER.		SECOND QUARTER.		THIRD QUARTER.		FOURTH QUARTER.		TOTAL.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Diphtheria	9	1	11	4	12	1	6	.....	38	6
Scarlet fever	15	.....	14	.....	4	1	7	.....	40	1
Typhoid fever	12	2	4	2	4	2	36	6	56	12
Smallpox .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cerebro-spinal fever .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

This table presents all the cases of these diseases and the deaths therefrom reported to me, but I am quite sure that the reports do not cover either all the cases or deaths that occurred.

Touching the prevalence of consumption, I have no means of judgment not open to other medical practitioners except receiving returns of death. Among the death returns there are a small number giving the cause of death as tuberculosis, which, I am convinced, means consumption, but do not feel authorized to so record them. I present them separately in this table of deaths, but join them in the total as consumption:

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
Consumption	8	14	11	14	47
Tuberculosis	4	6	2	2	14
Total	12	20	13	16	61

I have consulted a leading veterinarian, who informs me that in various parts of the county during the year there have been moderate outbreaks of hog cholera, but he can give me no particulars. He feels quite sure there has been no serious epidemic. In regard to other domestic animals he knows of no unusual distemper or fatality among any of them.

Respectfully submitted,

JAS. F. HIBBERD,

Sec'y Wayne County Board of Health.

WELLS COUNTY.

The state of health in Wells County for the past year has been unusually good. With the exception of diphtheria there has not been any epidemics of any of the contagious diseases. Diphtheria has prevailed to considerable extent, but the quarantine measures were brought to bear in all parts of the county and no extensive outbreak has occurred.

At one time during the fall an epidemic of diphtheria at Poneto, six miles south of this city did threaten for a time as there was not the proper understanding of the quarantine restrictions and a differing of opinion among the people. As a result I had the town trustees call a public meeting in the evening, and I visited the place and addressed the meeting, making a plain statement of the quarantine regulations. As two deaths from diphtheria had occurred the day previous and other cases were down, it was thought best to close the public schools. This was done for a few days—the school children being kept off the streets—and the disease subsided and the schools reopened with no further trouble in that locality.

There have been some cases of typhoid fever scattered throughout the county, caused from a low stage of the water principally, and from defective drainage about farm houses, and other unsanitary conditions due to negligence in the families.

No case of cerebro-spinal fever and but few cases of scarlet fever were reported during the year.

The sewer system of the city of Bluffton, which I mentioned in my letter a year ago, has now been completed at a cost of \$75,000. This ought to give us all that is needed to bring up the sanitary conditions of the city and guard against epidemics due to a lack of such public works. Our city has also made another great stride in the march of public improvements in the construction this summer of asphalt streets. Our principal business and residence streets were so improved, and several more are to be constructed of the same material next season. This kind of street is certainly the most sanitary of all others, as it can be kept clean and free from all decomposed matter, thus insuring purer air.

Our county infirmary with its sixty occupants is in good condition, no epidemics have occurred and the inmates are well cared for.

The county jail is new and modern and in first class condition, no sickness during the year.

The county court house just completed a few years since, is modern in all appointments and is kept in first-class condition. Our order to prohibit spitting may be cited here. It is the custom for men to congregate about the corners and public entrances of the court house and chew and spit great pools of tobacco juice on the walks and flagging, to the disgust of all who pass that way, to say nothing of the disease-breeding germs hidden therein. To stop all this the county commissioners issued an order and posted notices about the court house building prohibiting this vile and unsanitary practice, and it had the desired effect.

Hog cholera has prevailed to considerable extent in all parts of the county, and where I have talked on the subject I have recommended the government formula to be used in the way of cure and prevention.

The prevalence of phthisis in the county, like in all others, shows this diseases to be a constant slayer of human life, and undoubtedly causes the greatest number of deaths. Contagious diseases only prevail for a time and in limited sections, but this disease is at it all the time and in all places.

The order of the State Board to thoroughly scrub and renovate the school houses and revarnish same was enforced. I caused all the township trustees to meet with our County Board of Health on the same date, and stated the matter required fully with reference to cleaning, ventilation and the adjusting of the window blinds. The matters can not all be brought about at once, but they are before the people and in course of fulfillment.

Respectfully yours,

G. E. FULTON, M. D.,

Sec'y Wells County Board of Health.

WHITLEY COUNTY.

In answer to your inquiry of October 20th, I would say that the health conditions of Whitley County for the year ending September 30th, 1897, have been exceptionally favorable. The standard of health has been remarkable and the county has been unusually free from anything of an epidemical nature. Whenever there has been an outbreak of disease of any kind it has been short lived and closely confined.

The sanitary condition of the county court house and jail is good. The county poor house is also in good condition, but should be improved in one respect, viz.: The ward for the sick is not what such a place should be, owing to the poor heating and ventilating facilities, and altogether it is a dangerous place for invalids. I explained to the Commissioners the need of some improvement in this matter, and the satisfaction I obtained was that "the county had already been to a great expense."

A slight outbreak of diphtheria occurred in Aetna Township. This was probably caused by the visiting of people from Fort Wayne, Ind. The disease did not spread from the family and was treated after the manner usually followed by practitioners, a liberal amount of sulphurous acid gas being used wherever possible.

A very few cases of typhoid fever have been reported to me, but none of them were fatal. There have been no cases of cerebro-spinal fever or smallpox which have come to my notice. Phthisis is not prevalent in this county.

There was some hog cholera in the southwest part of the county, but not as an epidemic.

I enclose herewith a letter from the County Superintendent of Schools and one from O. V. Schuman, Health Officer of Columbia City, pertaining to the health conditions of the schools of the county, etc., which please use as suits your own convenience best.

The above are the facts as they appear to me from my own observation aided by the reports which have come to me from time to time.

Hoping this may be satisfactory, I am,

Yours very truly,

J. S. CRISWELL, M. D.

DOCTOR SCHUMAN'S REPORT.

The public health of Columbia City has been exceptionally good during the past year. We have had no epidemics, except a few cases of diphtheria, which have been at different parts of the outskirts of the city. There were seven cases in all reported, with five deaths. Every case was promptly quarantined by the City Health Officer. The public school on the south side was closed for three weeks, and a special police officer employed to see that quarantine was strictly kept and all children kept off from the streets.

There was one case of scarlet fever reported, which recovered, and there was no spread of the disease. There was not a single case of typhoid fever reported during the year, and there has not been a single case reported for the past two years, perhaps due to our excellent water supply and the clean condition in which the city has been kept.

We have three excellent school buildings, well kept, with all modern improvements, with reference to heat, light and ventilation.

I might expand on each of these subjects, but I think this will be sufficient, as I don't believe in long reports.

Hoping you will find this sufficient, I remain, as ever,

Yours, etc.,

O. V. SCHUMAN.

Columbia City, Nov. 10, 1897.

COUNTY SUPERINTENDENT'S REPORT.

Your letter in regard to the sanitary condition of the school property at hand. In reply, I find that the greater number of the school houses have been well prepared for school work, being clean, the woodwork well scrubbed and in many instances the walls either whitewashed or calcimined. Some houses are greatly in need of wall and ceiling disinfecting. In many cases the seating has been rearranged so as to afford greater comfort to pupils, both on account of light and heat. Several houses have the stoves so placed that many pupils suffer from excessive heat, while others suffer from the cold. In all such places changes are being made as rapidly as possible.

The outhouses, as a rule, are neglected, but in some townships special attention has been given to have them in first-class sanitary condition. The school grounds generally are well drained and provisions made for guarding against excessive mud and water.

Some schools are still using the old water bucket and obtain their drinking water from the well of some near-by patron. In such cases the sanitary conditions are not the best. A large per cent. of the schools, however, have good tubular wells on the school grounds and obtain the water for drinking as wanted direct from the well.

While some improvements should be made, the schools, as a whole, are in fairly good condition.

Very respectfully,

B. CLAPHAM.

HEALTH OFFICERS.

COUNTY HEALTH OFFICERS FOR THE YEAR END- ING SEPTEMBER 30, 1897.

<i>County.</i>	<i>Name.</i>	<i>Address.</i>
Adams	H. F. Costello	Decatur.
Allen	Carl Proegler	Ft. Wayne.
Bartholomew	S. M. Voris	Columbus.
Benton	Clark Cook	Fowler.
Blackford	John W. Sage	Hartford City.
Boone	J. R. Ball	Lebanon
Brown	J. C. Ross	Nashville.
Carroll	W. L. Sharver	Delphi.
Cass	F. A. Busjahn	Logansport.
Clark	I. N. Ruddell	Jeffersonville.
Clay	Robt. Hawkins	Brazil.
Clinton	G. W. Brown	Frankfort.
Crawford	G. R. Hazlewood	English.
Daviess	G. W. Williford	Washington.
Dearborn	L. H. Collins	Lawrenceburg.
Decatur	J. H. Alexander	Greensburg.
DeKalb	D. J. Swartz	Auburn.
Delaware	Hugh A. Cowing	Muncie.
Dubois	B. B. Brannick	Jasper.
Elkhart	J. H. Heatwole	Goshen.
Fayette	S. N. Hamilton	Connorsville.
Floyd	John H. Lemon	New Albany.
Fountain	W. R. Stout	Covington.
Franklin	Jas. F. West	Brookville.
Fulton	G. W. McMahan	Rochester.
Gibson	A. R. Burton	Princeton.
Grant	M. M. Wall	Marion.
Greene	H. R. Louder	Bloomfield.
Hamilton	E. E. Lochr	Noblesville.
Hancock	John Justice	Greenfield.
Harrison	Z. Funk	Corydon.
Hendricks	A. J. Hoadly	Danville.
Henry	E. S. Ferris	Newcastle.
Howard	W. R. Smith	Kokomo.
Huntington	Charles L. Wright	Huntington.
Jackson	David J. Cummings	Houston.
Jasper	Moses B. Alter	Rensselaer.
Jay	M. T. Jay	Portland.
Jefferson	James H. Matthews	Madison.
Jennings	James I. Hanna	Paris Crossing.
Johnson	Clarence Provence	Franklin.
Knox	C. W. Benham	Vincennes.
Kosciusko	T. J. Shakelford	Warsaw.
Lagrange	F. P. Griffith	Lagrange.

Lake	W. B. Blackstone.	Crown Point.
Laporte	F. T. Wilcox.	Laporte.
Lawrence	F. S. Hunter.	Bedford.
Madison	F. J. Hodges	Anderson.
Marion	A. L. Wilson.	Indianapolis.
Marshall	Samuel C. Loring	Burr Oak.
Martin	Geo. M. Freeman	Shoals.
Miami.	A. H. Kalbfleisch	Peru.
Monroe	A. J. Axtell	Bloomington.
Montgomery	E. W. Keegan.	Crawfordsville.
Morgan	C. M. Gravis.	Martinsville.
Newton	R. C. McCain	Kentland.
Noble	B. E. Miller	Albion.
Ohio	G. A. Stephenson	Rising Sun.
Orange.	C. L. Boyd.	Paoli.
Owen	N. D. Cox	Spencer.
Parke.	C. C. Morris	Rockville.
Perry	C. M. Brucker	Tell City.
Pike	J. W. Coleman.	Union.
Porter	A. P. Latherman	Valparaiso.
Posey	I. C. Watt	Mt. Vernon.
Pulaski	J. J. Thomas.	Winamac.
Putnam	G. W. Bence.	Greencastle.
Randolph	Chenowith.	Winchester.
Ripley	R. T. Olmsted	Versailles.
Rush	Lot Green	Rushville.
Scott	F. C. Sawyer	Scottsburg.
Shelby.	J. B. Stewart	Marietta.
Spencer	E. B. Harrison.	Rockport.
Starke	Isaac M. Smith.	Knox.
Stenben	W. H. Lane	Angola.
St. Joseph	T. B. Lyon	South Bend.
Sullivan	James M. Billman.	Sullivan.
Switzerland	J. W. Smith	Vevay.
Tippecanoe.	W. P. Yonkey	Lafayette.
Tipton	A. S. Dickey	Tipton.
Union	W. H. Hawley	College Corner, O.
Vanderburgh.	J. C. McClurkin.	Evansville.
Vermillion	O. M. Keys	Dana.
Vigo.	J. R. Willis	Terre Haute.
Wabash	J. H. Ford	Wabash.
Warren	J. R. Watson	West Lebanon.
Warrick	H. W. Scales.	Boonville.
Washington	H. M. Paynter	Salem.
Wayne.	James F. Hibberd	Richmond.
Wells.	George E. Fulton	Bluffton.
White	J. J. Hanmore.	Monticello.
Whitley.	J. F. Criswell	Churubusco.

CITY AND TOWN HEALTH OFFICERS, BY COUNTIES.

ADAMS COUNTY.

Decatur, P. B. Thomas.
Berne, Ernest Franz.

Geneva, H. M. Aspy.

ALLEN COUNTY.

Fort Wayne, A. J. Kessler.
Monroeville, no health officer.
New Haven, no health officer.

Huntertown, no health officer.
Sheldon, no health officer.

BARTHOLOMEW COUNTY.

Columbus, Geo. T. McCoy.
Hope, S. Slapp.
Jonesville, Wm. Bess.
Hartsville, no health officer.
Elizabethtown, no health officer.
Azalia, no health officer.
Burnsville, no health officer.
Clifford, no health officer.
Grammer, no health officer.
Newburn, no health officer.

Nortonsburg, no health officer.
Oglin, no health officer.
Petersville, no health officer.
Walesboro, no health officer.
Rugby, no health officer.
Waymansville, no health officer.
Waynesville, no health officer.
Whittington, no health officer.
Taylorsville, no health officer.
St. Louis, no health officer.

BENTON COUNTY.

Fowler, no health officer.
Oxford, no health officer.
Boswell, no health officer.
Ambia, no health officer.
Earl Park, no health officer.
Raub, no health officer.
Wadena, no health officer.
Lochiel, no health officer.

Aydelotte, no health officer.
East Fowler, no health officer.
Otterbein, no health officer.
Templeton, no health officer.
Chase, no health officer.
Dunnington, no health officer.
Odessa, no health officer.
Talbot, no health officer.

BLACKFORD COUNTY.

Hartford City, Chas. W. Corey.

Montpeller, C. M. Mulvey.

BOONE COUNTY.

Lebanon, W. H. Schultz.
Thornton, M. H. Rose.
Zionsville, W. Y. McNutt.

Jamestown, no health officer.
Whitestown, no health officer.

BROWN COUNTY.

(Not reported.)

CARROLL COUNTY.

Delphi, C. E. Angell.	Cutter, no health officer.
Flora, E. Armstrong.	Radnor, no health officer.
Camden, no health officer.	Burlington, no health officer.
Pyrmont, no health officer.	Sleeth, no health officer.
Bringhurst, no health officer.	Pittsburg, no health officer.
South Delphi, no health officer.	Ockley, no health officer.
Rockfield, no health officer.	Burrows, no health officer.
Yeoman, no health officer.	

CASS COUNTY.

(Not reported.)

CLARK COUNTY.

(Not reported.)

CLAY COUNTY.

Brazil, S. D. Black.	Saline, no health officer.
Clay City, no health officer.	Bowling Green, no health officer.
Knightsville, F. G. Thornton.	Cloverland, no health officer.
Center Point, Gilbert R. Finch.	Hoosiersville, no health officer.
Carbon, G. M. Pell.	Asherville, no health officer.
Staunton, Tim O'Conner.	Lena, no health officer.
Harmony, no health officer.	Howesville, no health officer.
Cardovia, no health officer.	

CLINTON COUNTY.

(Not reported.)

CRAWFORD COUNTY.

English, no health officer.	Leavensworth, no health officer.
Eckerty, no health officer.	Magnolia, no health officer.
Riceville, no health officer.	Temple, no health officer.
Grantsburg, no health officer.	Mt. Prospect, no health officer.
West Fork, no health officer.	Mifflin, no health officer.
Sulphur, no health officer.	Marengo, no health officer.
Alton, no health officer.	Taswell, no health officer.
Fredonia, no health officer.	Milltown, no health officer.

DAVIESS COUNTY.

Washington, G. W. Bolin.	Alfordsville, no health officer.
Montgomery, no health officer.	Glendale, no health officer.
Cannelburg, no health officer.	Elnora, no health officer.
Plainville, no health officer.	Odon, W. H. Hedrich.

DEARBORN COUNTY.

Lawrenceburg, S. B. Chamberlain.	Wilmington, no health officer.
Aurora, W. C. Henry.	Greendale, no health officer.
West Harrison, no health officer.	Cochran, no health officer.
Dillsboro, no health officer.	Moore's Hill, A. P. Daughtes.

DECATUR COUNTY.

Greensburg, Wm. H. Wooden.	Westport, no health officer.
St. Paul, no health officer.	Millhousen, no health officer.
Adams, no health officer.	Newpoint, no health officer.
Milford, no health officer.	Kingston, no health officer.
Burney, no health officer.	Clarksburg, no health officer.
Newburg, no health officer.	Moscow, no health officer.
Waynesburg, no health officer.	Sandusky, no health officer.
Setto, no health officer.	St. Omer, no health officer.
Harris City, no health officer.	Sardinia, no health officer.

DEKALB COUNTY.

Garrett, N. C. Browand.	Newville, no health officer.
Arctic P. O., no health officer.	St. Joe Station, no health officer.
Ashley, J. E. Ott.	St. Johns P. O., no health officer.
Auburn, J. C. Baxter.	Spencerville, no health officer.
Butler, Wm. P. Carpenter.	Waterloo, G. W. Hughes.
Corunna, no health officer.	

DELAWARE COUNTY.

Muncie, S. M. Ried.	Stout, D. L. Trowbridge.
New Burlington, J. N. Bell.	Selma and Smithfield, A. H. Good.
Granville, Elijah Early.	Eaton, G. M. Atkinson.
Albany, J. V. Baird.	Royerton, T. J. Mansfield.
Shideler, S. Allen.	Daleville and Cross Roads, W. S. Brandon.
Cowan and Oakville, R. Marshal.	New Corner, D. O. Munsey.
Yorktown, Cammack and Reed, D. N. Shively.	Wheeling, J. R. Tuttle.

DUBOIS COUNTY.

Huntingburg, G. P. Williams.	Birdseye, no health officer.
Jasper, E. J. Kempp.	

ELKHART COUNTY.

(Not reported.)

FAYETTE COUNTY.

Connersville, H. M. Logee.	Earnest, no health officer.
Alpine, no health officer.	Groves, no health officer.
Alquina, no health officer.	Harrisburgh, no health officer.
Bentonville, no health officer.	Hawkins, no health officer.
Bentley, no health officer.	Lyons Station, no health officer.
Columbia, no health officer.	Longwood, no health officer.
Dennison, no health officer.	Nulltown, no health officer.
Everton, no health officer.	Orange, no health officer.

FLOYD COUNTY.

New Albany, J. F. Weathers.

FOUNTAIN COUNTY.

Covington, T. M. Henderson.	Aylesworth, no health officer.
Attica, M. T. Case.	Wallace, no health officer.
Veedersburg, B. F. Young.	Kingman, no health officer.
Hillsboro, Frank Songes.	Yeddo, no health officer.
Fountain P. O., no health officer.	Silverwood, no health officer.
Rob Roy, no health officer.	Coal Creek, no health officer.
Stone Bluffs, no health officer.	Steam Corners, no health officer.
Newtown, no health officer.	Independence, no health officer.
Melott, no health officer.	

FRANKLIN COUNTY.

Laurel, S. A. Gifford.	Metamora, no health officer.
Brookville, Jas. T. West.	Cedar Grove, no health officer.
Oldenburg, no health officer.	Blooming Grove, no health officer.
Mt. Carmel, no health officer.	New Trenton, no health officer.
Fairfield, no health officer.	

FULTON COUNTY.

Rochester, W. S. Crosby.	Blue Grass, no health officer.
Akron, no health officer.	Athens, no health officer.
Kewanna, no health officer.	Richland Center, no health officer.
Fulton, no health officer.	Disko, no health officer.
Falma, no health officer.	Bearss, no health officer.
Leiters, no health officer.	Tiosa, no health officer.
DeLong, no health officer.	Wagners, no health officer.
Grass Creek, no health officer.	

GIBSON COUNTY.

Princeton, R. S. Anderson.	Patoka, U. S. Holder.
Oakland City, E. E. Eads.	Owensville, Dr. Moore.
Fort Branch, W. W. French.	

GRANT COUNTY.

(Not reported.)

GREENE COUNTY.

Bloomfield, Thomas Wheeler.	Worthington, H. B. Leavitt.
Linton, H. A. Little.	

HAMILTON COUNTY.

Noblesville, Eli Loehr.	Westfield, S. C. Dove.
Sheridan, no health officer.	Fisher's Station, J. P. Heath,
Cicero, F. M. Warford.	

HANCOCK COUNTY.

Greenfield, J. P. Black.	New Palestine, S. C. Ely.
Fortville, A. H. Stuart.	

HARRISON COUNTY.

Corydon, Z. T. Funk.
Elizabeth, Wm. Moore.
Lanesville, Z. C. Wolfe.
Mauckport, Wm. Denbo.

Iaconia, B. Forbis.
New Amsterdam, no health officer.
New Middleton, D. J. Marshall.
Crandall, — Ramsay.

HENDRICKS COUNTY.

Danville, M. G. Parker.
Plainfield, no health officer.
Brownsburg, no health officer.
Pittsboro, no health officer.
Lizton, no health officer.
North Salem, no health officer.
New Winchester, no health officer.

Hadley, no health officer.
Coatesville, no health officer.
Amo, no health officer.
Clayton, no health officer.
Belleville, no health officer.
Cartersburg, no health officer.
Stilesville, no health officer.

HENRY COUNTY.

Sulphur Springs, no health officer.
Mt. Summit, no health officer.
Cadiz, no health officer.
Spiceland, no health officer.
Dunreith, no health officer.

Lewisville, no health officer.
Knightstown, E. J. Drake.
Middletown, F. L. Thornburg.
New Castle, J. C. Wayman.

HOWARD COUNTY.

Kokomo, W. H. Martin.
Greentown, Dr. Powell.
Oakford, no health officer.
New London, no health officer.

Russiaville, no health officer.
Plevna, no health officer.
Kappa, no health officer.
Jerome, no health officer.

HUNTINGTON COUNTY.

Huntington, no health officer.
Andrews, no health officer.
Warren, no health officer.
Mt. Etna, no health officer.
Markle, no health officer.

Roanoke, no health officer.
Kelso, no health officer.
Toledo, no health officer.
River, no health officer.
Bippus, no health officer.

JACKSON COUNTY.

Seymour, G. G. Grassele.
Brownstown, E. A. Converse.
Crothersville, Preston Roder.
Medora, no health officer.
Vallonia, no health officer.
Sparksville, no health officer.
Mooney, no health officer.
Houston, no health officer.
Freetown, no health officer.

Normans, no health officer.
Kurtz, no health officer.
Surprise, no health officer.
Courtland, no health officer.
Rockford, no health officer.
Reddington, no health officer.
Uniontown, no health officer.
Dudleytown, no health officer.
Tampico, no health officer.

JASPER COUNTY.

Rensselaer, S. C. Johnson.	Fair Oaks, no health officer.
Remington, no health officer.	DeMotte, no health officer.
Surrey, no health officer.	Kniman, no health officer.
Parr, no health officer.	Wheatfield, no health officer.

JAY COUNTY.

Portland, D. S. Stanton.	Bryant, no health officer.
Dunkirk, G. W. Fertich.	Pennville, no health officer.
Redkey, F. R. Stiers.	New Corydon, no health officer.
Salamonia, Dr. Hutchinson.	

JEFFERSON COUNTY.

Madison, George E. Trow.	Hanover, no health officer.
West Madison, no health officer.	Brooksbury, no health officer.

JENNINGS COUNTY.

North Vernon, no health officer.	Vernon, no health officer.
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JOHNSON COUNTY.

(Not reported.)

KNOX COUNTY.

Vincennes, Norman E. Beckes.	Emison, no health officer.
Wheatland, no health officer.	Freelandville, no health officer.
Bicknell, no health officer.	Frichton, no health officer.
Edwardsport, no health officer.	Orrville, no health officer.
Bruceville, no health officer.	Pond Creek Mills, no health officer.
Sanborn, no health officer.	Purcell Station, no health officer.
Monroe City, J. M. Goldman.	Red Cloud, no health officer.
Decker Station, no health officer.	Verne, no health officer.
Oaktown, no health officer.	Westphalia, no health officer.

KOSCIUSKO COUNTY.

Warsaw, J. A. Chandler.	Etna Green, no health officer.
Piercetown, T. Moody.	Sidney, no health officer.
Milford, Dr. Rotter.	Oswego, no health officer.
Silver Lake, no health officer.	Burkett, no health officer.
Mentone, no health officer.	Palestine, no health officer.
Syracuse, no health officer.	Kinzie, no health officer.
Leesburg, no health officer.	Milwood, no health officer.
Claypool, no health officer.	Clunette, no health officer.
Atwood, no health officer.	Wawassee, no health officer.
North Webster, no health officer.	Angleton, no health officer.
Eagle Lake, no health officer.	Sevastopol, no health officer.
Gravelton, no health officer.	Beaver Dam, no health officer.
Packerton, no health officer.	

LAGRANGE COUNTY.

Lagrange, Francis P. Griffith.	Ontario, no health officer.
Lima, no health officer.	Topeka, no health officer.
Wolcottville, no health officer.	South Milford, no health officer.
Lexington, A. Hamlet.	Mongo, no health officer.
Shipshewana, no health officer.	Plato, no health officer.

LAPORTE COUNTY.

Laporte, N. S. Darling.	Hanna, no health officer.
Michigan City, W. R. Godfrey.	Union Mills, no health officer.
Rolling Prairie, no health officer.	Wellsboro, no health officer.
Otis, no health officer.	Kingsbury, no health officer.
Stillwell, no health officer.	Westville, B. W. Hollenbeck.
Wanatah, no health officer.	

LAWRENCE COUNTY.

Bedford, no health officer.	Mitchell, no health officer.
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MADISON COUNTY.

Elwood, G. F. Ginn.	Perkinsville, no health officer.
Alexandria, F. G. Kellar.	Ingals, no health officer.
Pendleton, F. L. Stone.	Markleville, no health officer.
Frankton, J. S. Peck.	Lapel, no health officer.
Summitville, no health officer.	

MARION COUNTY.

Indianapolis, E. D. Clark.	Irvington, Thos. W. Thompson.
Broad Ripple, J. W. Bates.	Southport, R. G. Graydon.

MARSHALL COUNTY.

Plymouth, J. S. Martin.	Argos, W. A. Oyler.
Bourbon, A. C. Matchett.	Culver, Thomas Medburn.
Bremen, A. B. Youkman.	

MARTIN COUNTY.

(Not reported.)

MIAMI COUNTY.

Peru, D. C. Reidnour.

MONROE COUNTY.

(Not reported.)

MONTGOMERY COUNTY.

Ladoga, E. O. Price.	Kirkpatrick, no health officer.
Waveland, L. T. Ball.	Wingate, no health officer.
Browns Valley, no health officer.	Linden, Dr. Dingman.
New Market, Dr. Beatty.	Darlington, Dr. Coffman.
Alamo, L. F. Brown.	New Ross, Dr. King.
Waynetown, no health officer.	

MORGAN COUNTY.

(Not reported.)

NEWTON COUNTY.

Kentland, no health officer.	Mt. Ayr, no health officer.
Goodland, no health officer.	Rose Lawn, no health officer.
Brook, no health officer.	Lake Village, no health officer.
Foresman, no health officer.	Morocco, no health officer.
Fair Oaks, no health officer.	

NOBLE COUNTY.

Kendallville, A. G. Coyner.	Albion, B. E. Miller.
Ligonier, W. A. Shobe.	Avilla, F. C. Maloney.

OHIO COUNTY.

Rising Sun, G. A. Stevenson.	Bens Branch, no health officer.
Laughrey, no health officer.	North, no health officer.
Milton, no health officer.	Bascom, no health officer.

ORANGE COUNTY.

(Not reported.)

OWEN COUNTY.

Spencer, Jacob Coble.	Gosport, F. V. Stuckey.
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PARKE COUNTY.

(Not reported.)

PERRY COUNTY.

Tell City, Wm. Cluthe.	Derby, no health officer.
Cannelton, Dr. Hendershot.	Rome, no health officer.
Troy, D. C. Dome.	

PIKE COUNTY.

Petersburg, no health officer.	Hosner, no health officer.
Winslow, no health officer.	Augusta, no health officer.
Otwell, no health officer.	Velpen, no health officer.
Stendal, no health officer.	Algiers, no health officer.
Union, no health officer.	Pleasantville, no health officer.
Oatsville, no health officer.	Pikesville, no health officer.

PORTER COUNTY.

Valparaiso, A. N. Letherman.
Hebron, W. F. Lohn.

Chesterton, C. H. Johnson.
Kouts, no health officer.

POSEY COUNTY.

(Not reported.)

PULASKI COUNTY.

Winamac, no health officer.
Francesville, no health officer.

Monterey, no health officer.

PUTNAM COUNTY.

(Not reported.)

RANDOLPH COUNTY.

Winchester, A. H. Hastings.
Union City, Wm. Commons.
Parker, J. M. Vanderburg.
Ridgeville, A. H. Farquhar.

Farmland, O. E. Current.
Lynn, C. Cox.
Losantville, H. P. Franks.

RIPLEY COUNTY.

Cross Plains, no health officer.
New Marion, no health officer.
Holton, no health officer.
Poston, no health officer.
Milan, no health officer.
Delaware, no health officer.
Sunman, no health officer.
Spades, no health officer.

Morris, no health officer.
Napoleon, no health officer.
Elrod, no health officer.
Rexville, no health officer.
Benham, no health officer.
Versailles, R. T. Olmsted.
Batesville, J. R. Davis.
Osgood, T. M. Brenton.

RUSH COUNTY.

Rushville, J. H. Spurrier.
Carthage, F. W. Gregon.
Arlington, no health officer.
New Salem, no health officer.
Richland, no health officer.
Manilla, no health officer.
Moscow, no health officer.

Glenwood, no health officer.
Griffins, no health officer.
Sexton Mays, no health officer.
Falmouth, no health officer.
Homer, no health officer.
Gowdy, no health officer.

SCOTT COUNTY.

Scottsburg, no health officer.
Austin, no health officer.
Blocher, no health officer.
Lexington, no health officer.

Alpha, no health officer.
New Frankfort, no health officer.
Goshen, no health officer.
Woostertown, no health officer.

SHELBY COUNTY.

Shelbyville, O. L. Adams.
 Morristown, Dr. Hess.
 Marietta, no health officer.
 Smithland, no health officer.
 Brugal, no health officer.
 Mt. Auburn, no health officer.
 Flat Rock, no health officer.
 Sulphur Hill, no health officer.
 Lewis Creek, no health officer.
 Fenns, no health officer.
 St. Paul, no health officer.
 Waldron, no health officer.

Prescott, no health officer.
 Fairland, no health officer.
 London, no health officer.
 Boggstown, no health officer.
 Fountaintown, no health officer.
 New Palestine, no health officer.
 Gwynneville, no health officer.
 Blue Ridge, no health officer.
 Noah, no health officer.
 Carrollton, no health officer.
 Rays Crossing, no health officer.
 Middletown, no health officer.

SPENCER COUNTY.

Rockport, E. P. Harrison.
 Lake, no health officer.
 Eureka, no health officer.
 Centerville, no health officer.
 Chrisney, no health officer.
 Newtonville, no health officer.
 Patronville, no health officer.
 Halfield, no health officer.

St. Meinrad, no health officer.
 Fulda, no health officer.
 Buffalo, no health officer.
 Enterprise, no health officer.
 Midway, no health officer.
 Santa Claus, no health officer.
 Dale, Joseph Clifford.
 Grandview, N. C. Finch.

STARKE COUNTY.

(Not reported.)

STEUBEN COUNTY.

Angola, W. H. Lane.
 Hudson, Dr. Hamilton.
 Fremont, no health officer.
 Orland, no health officer.
 Metz, no health officer.
 Ray, no health officer.
 Hamilton, no health officer.
 Pleasant Lake, no health officer.
 Salem Center, no health officer.

Steubenville, no health officer.
 Flint, no health officer.
 Ashley, no health officer.
 Crooked Creek, no health officer.
 Nevada Mills, no health officer.
 York, no health officer.
 Ellis, no health officer.
 Helmer, no health officer.

ST. JOSEPH COUNTY.

South Bend, Chas. Stoltz.
 Mishawaka, W. E. Borriley.
 Walkerton, H. D. Denant.
 North Liberty, J. N. Reece.

New Carlisle, no health officer.
 Lakeville, no health officer.
 Osceola, no health officer.
 Granger, no health officer.

SULLIVAN COUNTY.

Sullivan, J. M. Billman.	Paxton, no health officer.
Carlisle, E. D. Dennison.	Pleasantville, no health officer.
Merom, H. F. Harper.	Dugger, no health officer.
Farmersburg, R. H. Van Cleve.	Lyonton, no health officer.
Hymera, no health officer.	Farnsworth, no health officer.
Fairbanks, no health officer.	Jacksonhill, no health officer.
Graysville, no health officer.	Star City, no health officer.
New Lebanon, no health officer.	Alum Cave, no health officer.

SWITZERLAND COUNTY.

(Not reported.)

TIPPECANOE COUNTY.

(Not reported.)

TIPTON COUNTY.

Tipton, H. G. Read.	Ekin, no health officer.
Windfall, no health officer.	Hobbs, no health officer.
Sharpville, no health officer.	Curtisville, no health officer.
Goldsmith, no health officer.	Kempton, no health officer.

UNION COUNTY.

(Not reported.)

VANDERBURGH COUNTY.

(Not reported.)

VERMILLION COUNTY.

Clinton, A. A. Washburn.	Cayuga, W. P. Darrach.
Newport, Jas. Wallace.	Dana, O. M. Keyes.

VIGO COUNTY.

(Not reported.)

WABASH COUNTY.

Wabash City, L. W. Smith.	La Gro, no health officer.
North Manchester, Frank Kitson.	Roann, no health officer.

WARREN COUNTY.

(Not reported.)

WARRICK COUNTY.

Boonville, D. W. Tucker.	Elberfeld, no health officer.
New Burgh, O. A. Lett.	Selvin, no health officer.
Lynnville, no health officer.	Heilman, no health officer.
Folsomville, no health officer.	Chandler, no health officer.

WASHINGTON COUNTY.

Salem, H. M. Paynter.	Boston, no health officer.
Little York, no health officer.	Livonia, no health officer.
New Philadelphia, no health officer.	Martinsburg, no health officer.
Campbellsburg, no health officer.	Canton, no health officer.
Hardinsburg, no health officer.	Pekin, no health officer.
Fredericksburg, no health officer.	Kossuth, no health officer.

WAYNE COUNTY.

Richmond, T. H. Davis.	Fountain City, T. W. Taylor.
Boston, J. J. Rife.	Hagerstown, E. H. Thurston.
Cambridge City, J. E. Wright.	Milton, I. F. Sweeney.
Centerville, S. H. Kersey.	Mt. Auburn, H. B. Boyd.
Dublin, C. R. McTaggart.	Spring Grove, no health officer.
East Germantown, A. E. Ehle.	White Water, A. H. Jones.

WELLS COUNTY.

Bluffton, B. S. Horne.	Nottingham, no health officer.
Ossian, no health officer.	Mt. Zion, no health officer.
Poneto, no health officer.	Uniondale, no health officer.
Zanesville, no health officer.	

WHITE COUNTY.

Monticello, J. D. McCann.	Burnetsville, Dr. Reed.
Monon, Dr. Clayton.	Reynolds, Dr. Delzell.
Wolcott, Dr. Small.	Idaville, no health officer.
Brookston, Dr. Brockway.	Chalmers, no health officer.

WHITLEY COUNTY.

Columbia City, O. V. Schuman.	South Whitley, no health officer.
Larwill, no health officer.	Coesse, no health officer.
Churubusco, no health officer.	

STATISTICAL TABLES.

TABLE A.

Deaths by Counties for the Year Ending September 30, 1897.

COUNTIES.	1896.			1897.									Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	
Adams.....	20	9	6	7	8	9	7	9	4	8	26	8	121
Allen.....	47	36	73	75	76	75	57	56	74	77	86	52	784
Bartholomew.....	41	19	19	21	19	24	25	25	4	24	23	22	269
Benton.....	1	3	8	4	2	4	5	4	4	1	7	4	45
Blackford.....	10	8	3	6	1	4	3	1	2	.....	2	2	42
Boone.....	14	13	17	9	19	13	21	18	9	11	23	14	181
Brown.....	10	3	3	1	6	3	6	4	11	3	2	3	58
Carroll.....	4	2	5	7	5	1	16	12	4	3	4	1	76
Cass.....	24	21	30	22	27	15	23	23	24	29	28	22	290
Clark.....	17	16	16	12	6	14	9	10	5	4	12	7	128
Clay.....	12	6	7	2	16	8	11	8	7	46	28	7	158
Clinton.....	12	17	2	10	8	11	8	6	4	4	.....	.....	84
Crawford.....	1	1	3	3	.....	3	4	.....	4	1	2	.....	21
Daviess.....	17	9	4	14	10	16	5	14	12	12	11	8	132
Dearborn.....	20	6	9	13	12	10	8	11	9	9	8	10	125
Decatur.....	23	14	24	13	13	9	15	5	10	11	9	12	158
Dekalb.....	15	2	2	7	13	11	5	9	14	6	8	15	107
Delaware.....	34	24	12	29	38	26	35	35	25	54	70	45	427
Dubois.....	19	9	14	23	12	8	7	11	8	13	17	11	152
Elkhart.....	.....	.....	.....	22	9	13	19	8	15	.....	.....	.....	86
Fayette.....	9	8	7	8	10	9	10	4	6	10	15	7	103
Floyd.....	18	14	22	27	13	1	15	6	8	12	3	8	147
Fountain.....	12	8	9	12	11	9	5	8	8	21	11	15	129
Franklin.....	13	8	3	13	11	7	7	9	9	19	18	11	128
Fulton.....	6	4	4	6	5	11	1	12	3	30	16	7	105

TABLE A—Continued.

COUNTIES.	1896.				1897.								Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	
Gibson.....	24	17	16	26	14	13	38	17	14	24	25	16	244
Grant.....	.....	.....	8	13	4	6	2	8	.....	18	11	9	79
Greene.....	4	3	3	7	7	14	17	12	9	24	18	14	132
Hamilton.....	24	6	10	18	7	10	13	6	14	21	18	12	159
Hancock.....	21	12	9	19	19	9	14	6	10	16	17	13	167
Harrison.....	20	4	4	5	5	3	10	.....	2	7	1	8	64
Hendricks.....	6	13	10	28	6	9	17	.....	8	6	9	4	118
Henry.....	27	12	11	8	20	18	15	16	17	9	13	24	190
Howard.....	4	10	16	9	8	15	10	14	9	3	11	13	122
Huntington.....	28	23	13	14	20	21	17	19	6	27	33	21	244
Jackson.....	5	9	5	17	5	8	14	5	2	13	12	4	99
Jasper.....	5	4	7	7	4	3	13	9	9	2	2	3	68
Jay.....	17	11	25	11	14	14	8	12	7	15	31	11	168
Jefferson.....	6	3	3	19	2	12	23	10	7	25	11	8	123
Jennings.....	6	3	3	2	9	11	2	1	4	6	3	6	56
Johnson.....	10	16	7	23	9	7	8	4	1	5	8	7	105
Knox.....	7	9	3	13	6	13	10	7	4	16	8	10	108
Kosciusko.....	12	6	12	9	6	6	22	4	4	4	9	9	97
Lagrange.....	8	9	11	14	13	21	11	14	13	6	11	10	141
Lake.....	59	27	22	62	45	32	40	13	13	.....	.....	.....	313
Laporte.....	20	29	36	26	30	19	40	34	22	31	30	34	351
Lawrence.....	4	10	13	7	7	20	4	10	10	15	13	6	119
Madison.....	33	17	26	26	38	25	49	19	13	44	33	26	360
Marion.....	191	189	188	196	196	188	181	190	197	283	241	202	2,422
Marshall.....	4	.....	.....	8	6	5	16	5	3	3	10	2	63
Martin.....	.....	.....	.....	7	5	5	4	3	3	5	5	6	43
Miami.....	13	9	12	2	6	16	13	17	6	22	12	10	138
Monroe.....	15	7	4	14	14	6	12	30	10	20	20	8	160
Montgomery.....	14	11	14	11	17	10	10	10	13	22	20	17	169
Morgan.....	5	8	7	2	8	5	12	5	5	20	8	3	88

Newton.....	7	2	4	3	6	1	3	1	1	5	3	5	40
Noble.....	6	6	3	3	1	1	1	5	1	5	3	3	39
Ohio.....	5	4	2	4	3	2	2	4	4	6	1	5	38
Orange.....	1	2	2	8	3	3	6	2	3	17	13	18	56
Owen.....	19	11	9	5	11	8	11	1	7	7	4	5	120
Parke.....													
Ferry.....	5	11	10	15	8	11	10	10	8	13	7	10	118
Pike.....	7	1	6	10	1	1	1	2	8	1	9	1	20
Porter.....	3	9	12	10	18	16	1	5	8	8	16	17	89
Posey.....	14	13	9	38	26	10	25	14	18	23	4	5	232
Pulaski.....													
Putnam.....	11	3	5	9	3	3	2	1	4	3	6	10	40
Randolph.....	36	16	13	31	15	8	22	16	10	25	12	17	164
Ripley.....	7	9	5	21	4	9	33	13	11	30	15	11	244
Rush.....	13	6	10	10	4	12	11	5	6	10	11	4	117
Scott.....													
Shelby.....	8	9	8	3	2	1	3	4	4	7	12	9	104
Spencer.....	15	23	20	32	16	14	10	12	7	23	10	6	34
Starke.....	4	3	4	29	14	19	10	10	7	13	10	10	204
Steuben.....	25	8	16	17	4	11	2	1	6	1	2	2	168
St. Joseph.....													
Sullivan.....	50	36	28	29	27	24	22	17	20	20	15	26	314
Switzerland.....	1	8	3	26	25	28	23	13	13	13	24	25	202
Tippacanoe.....	5	4	7	4	5	7	5	5	3	6	1	3	55
Tipton.....	21	19	19	17	19	19	26	16	14	14	21	17	222
Union.....	1	5	5	7	6	5	5	15	6	15	7	9	95
Vanderburgh.....													
Vermillion.....	73	51	40	132	3	4	3	3	1	3	6	2	32
Vigo.....	61	60	44	65	39	54	47	31	50	61	36	30	922
Wabash.....													
Warren.....	3	2		6	2	3	5	4	5	9	4	8	46
Warriek.....	14	22	10	10	2	1	2	5	3	7	6	4	31
Washington.....	3	7	5	4	11	1	5	3	10	8	2	2	89
Wayne.....													
Wells.....	43	32	37	44	44	48	38	47	33	37	44	37	484
White.....	21	16	17	25	17	17	15	13	11	15	13	13	193
Whitley.....	8	6	9	12	2	2	1	1	3	3	4	3	53
Whitley.....	13	8	11	2	2	2	1	2	1	1	5	4	44
Total.....	1,510	1,169	1,217	1,621	1,367	1,238	1,509	1,190	1,059	1,630	1,479	1,213	16,252

TABLE B.

Causes of Death by Months, Sex and Color, Year Ending September 30, 1897.

CLASS ONE—ZYMOTIC DISEASES.	1896.			1897.									COLOR.				Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	White.		Colored.		
													MALE.	FEM.	MALE.	FEM.	
ORDER ONE—MIASMATIC.																	
Anthrax	3	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	5	10	.....	15
Chill, congestive	40	2	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	207	171	1	373
Cholera infantum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	9
Cholera morbus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	112	112	2	227
Croup	42	43	28	44	18	14	9	6	6	3	3	.....	.....	34	17	.....	51
Diarrhea	3	5	3	4	6	2	3	4	3	6	9	7	.....	341	369	3	715
Diphtheria	167	125	103	68	36	32	49	16	15	17	42	45	.....	166	192	.....	358
Dysentery	27	6	2	4	1	2	.....	.....	12	112	131	56	.....	31	25	.....	56
Enterocolitis	10	1	1	5	3	5	6	5	6	6	12	9	.....	29	19	.....	48
Erysipelas	7	3	5	4	3	5	2	1	.....	.....	.....	.....	.....	13	10	1	24
Fever, catarrhal	1	2	3	5	7	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Fever, cerebro-spinal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fever, congestive	13	6	5	3	2	7	5	7	5	16	18	16	.....	39	53	5	97
Fever, malarial	3	1	1	3	.....	.....	.....	.....	1	1	.....	.....	.....	30	8	.....	30
Fever, puerperal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	14
Fever, remittent	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	14
Fever, scarlet	11	4	3	4	6	2	6	6	6	.....	.....	.....	.....	16	39	.....	55
Fever, typhoid	125	63	56	44	26	21	35	19	13	48	90	115	.....	319	312	12	655
Fever, typho-malarial	2	1	.....	1	5	3	2	3	3	2	4	1	.....	11	17	1	35
Fever, typho-malarial	1	.....	.....	4	4	3	4	4	3	5	5	3	.....	18	17	.....	19
Gangrene	2	6	5	15	18	14	19	7	7	3	1	1	.....	89	114	1	208
La grippe	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	44	1	92
Mesles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Peritonitis, puerperal	.....	.....	.....	8	5	7	16	10	10	18	12	4	.....	36	63	2	103
Pertussis	6	2	5	5	7	5	11	7	6	11	7	2	.....	37	54	3	96
Pyæmia	13	8	3	10	7	5	6	6	6	6	11	2	.....	37	54	3	96
Septicæmia, puerperal	1	.....	.....	4	6	4	6	6	6	6	.....	.....	.....	.....	43	.....	44
Smallpox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	482	283	248	274	204	170	216	129	133	388	446	355	.....	1,558	1,714	26	3,328

TABLE B—Continued.

CLASS ONE—ZYMOTIC DISEASES.	1896.			1897.									Color.			Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	White.	Colored.		
														MALE.	FEM.	
ORDER TWO—ENTHETIC.																
Syphilis	1	1	2	1	2							2	1	4	6	10
Total	1	1	2	1	2							2	1	4	6	10
ORDER THREE—DIETIC.																
Delirium tremens		1											3	4		4
Infantion	34	23	26	37	26	28	34	21	18	57	33	33	180	154	17	370
Intemperance.....		3		3	1				2	2	2	2	15			15
Purpura.....																
Total	34	27	26	40	27	28	34	21	20	59	35	38	199	154	17	389
ORDER FOUR—																
Hydrophobia.....										1			1	2		2
Total										1		1	2			2

TABLE B—Continued.

CLASS TWO—CONSTITUTIONAL.	1896.				1897.									COLOR.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	White.	Colored.		
ORDER ONE—DIATHETIC.																
Anæmia.....	1		3	5	2	3	3	2	1	2	3	1	8	18	26	
Cancer.....	35	38	47	29	31	39	52	44	40	34	32	23	156	280	444	
Dropsy.....	11	11	7	15	6	10	5	19	4	12	11	11	52	70	122	
Gout.....																
Leucocythæmia.....								1							1	
Rheumatism.....	4	6	3	7	7	6	5		4	5	1	6	29	21	54	
Total.....	51	55	60	56	46	58	65	66	49	53	47	41	245	380	647	
ORDER TWO—TUBERCULAR.																
Hydrocephalus.....			2				4		1		1		5	3	8	
Meningitis, tubercular.....	1	4	6	6	4	3	5	6	3	5	4	4	22	24	48	
Phthisis.....	160	114	125	206	179	192	220	172	144	178	162	122	794	1,028	1,974	
Scrofula.....		2		1	5	1		1			2		5	7	12	
Total.....	161	120	133	213	188	196	229	179	148	183	169	123	826	1,062	2,042	

TABLE B—Continued.

CLASS THREE—LOCAL DISEASES.	1893.				1897.									COLOR.				Total
	Oct.	Nov.	Dec.		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	White.		Colored.		
														MALE.	FEM.	MALE.	FEM.	
ORDER ONE—NERVOUS.																		
Apoplexy.....	31	23	32	32	32	14	29	23	20	17	17	27	17	156	117	9	282	
Brain, abscess.....	5	1	2	2	7	5	1	8	6	5	10	5	6	42	2	28	4	
Brain, congestion.....	18	14	14	14	22	27	21	21	12	13	34	25	22	123	99	11	71	
Brain disease.....	6	4	1	1	2	3	3	2	4	1	3	4	4	6	25	10	243	
Brain fever.....	6	4	5	5	3	3	2	2	4	3	3	4	2	21	18	1	31	
Brain softening.....	6	2	4	4	2	2	4	4	2	3	8	5	2	21	1	1	39	
Cerebral hemorrhage.....	2	7	4	4	2	2	4	4	6	2	6	9	1	123	113	3	43	
Cerebritis.....	22	22	18	18	18	30	12	20	17	20	26	28	15	25	17	9	42	
Convulsions.....	2	5	2	2	1	4	1	5	5	3	4	2	3	17	19	1	248	
Epilepsy.....	2	1	1	1	3	2	3	2	4	2	1	3	3	8	10	1	37	
Insanity.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	11
Locomotor ataxia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	8	.....	13
Meningitis.....	25	19	23	23	22	34	24	43	32	35	43	28	28	180	155	10	356	
Meningitis, cerebral.....	5	6	6	6	3	2	9	9	12	6	5	3	3	29	26	1	58	
Meningitis, spinal.....	5	9	3	3	1	5	10	.....	2	2	7	7	4	26	26	1	55
Myelitis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2
Nervous prostration.....	1	2	2	2	3	2	1	1	2	.....	1	.....	1	6	9	1	16
Neuralgia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Neurasthenia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Paralysis.....	31	28	34	34	50	48	30	40	42	1	40	32	34	3	220	199	14	437
Spina bifida.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	4	.....	9
Spine, disease of.....	5	2	3	3	3	3	1	2	.....	2	2	2	3	11	14	.....	25
Spine, sclerosis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	.....	6
Tetanus.....	5	.....	3	3	1	1	2	.....	3	1	1	4	1	11	9	1	21
Total.....	177	151	160	173	189	189	152	193	170	147	214	191	145	1,047	923	34	2,082	
ORDER TWO—CIRCULATORY.																		
Congestion.....	1	1	.....	.....	.....	.....	1	5	1	1	4	1	1	11	5	.....	1
Heart disease.....	101	66	95	117	98	98	90	113	76	79	93	80	67	28	445	21	1,075	
Hemorrhage.....	4	3	2	5	4	4	5	5	9	15	4	6	5	26	32	3	164	
Total.....	106	70	97	123	102	102	93	123	86	95	101	87	73	626	482	24	1,156	

TABLE B—Continued.

CLASS THREE—LOCAL DISEASES.	1896.					1897.									Color.		Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	White.	Colored.			
ORDER THREE—RESPIRATORY.																	
Asthma.....	14	6	11	8	5	4	3	4	2	7	6	4	42	32	74		
Bronchitis.....	15	21	28	37	33	35	48	20	9	14	9	16	116	150	265		
Catarrh.....	2		1	4	1			2	2	1		5	10	12	23		
Emphysema.....																	
Hæmoptysis.....																	
Laryngitis.....	6	4	5	4	3	1	1	2	1	1	2	2	22	14	36		
Lungs, abscess.....			1	1	1	1	1	3	4	2	3	1	4	7	11		
Lungs, congestion.....	8	3	6	11	11	12	5	3	6	4	5	5	32	40	73		
Lungs, disease.....	6	11	9	13	5	6	8	8	1	1	1	3	42	26	73		
Pharyngitis.....				1													
Pleuritis.....	1		1				2	1	1				4	3	7		
Pneumonitis.....	46	91	110	227	212	148	146	75	39	36	24	27	597	512	1,181		
Pneumonitis, broncho.....	1	2	3	1	1	1	1	4		1			7	9	12		
Pneumonitis, catarrhal.....	2	1	1	2	1	1	3	2				1	2	4	8		
Pneumonitis, pleuro.....			1	1													
Pneumonitis, typho.....	2	1		1	2						1	1	5	3	8		
Total.....	103	142	177	311	276	213	223	124	62	69	55	57	888	824	1,812		
ORDER FOUR—DIGESTIVE.																	
Appendicitis.....																	
Bowels, catarrh.....	5	3	2	4	5	1	3	5	3	5	5	2	28	14	43		
Bowels, congestion.....			3	1		2							2		2		
Bowels, disease of.....	4	6	3	19	11	9	11	5	2	2	4	3	13	14	27		
Bowels, hemorrhage.....	13	3	9	2					7	20	10	20	60	66	137		
Bowels, obstruction.....	2			2	4	2	6	1	5	2	1	4	17	26	53		
Bowels, ulceration.....	5	5	1	6									1	1	45		
Bowels, ulceration.....									2				4	7	5		
Colitis.....	3	1		2		5	2	1	3	1	2	2	7	12	20		
Dyspepsia.....			3			1							8		8		
Enteritis.....	11	6	2	6	7	1	8	3	13	8	9	5	39	4	82		
Gall stones.....																	
Gastritis.....	1	4	6	5	12	4	10	11	10	13	11	4	51	48	99		
Gastroenteritis.....	9	4	4				2						17		42		
Hepatitis.....	3	3	2	1	2	6	4	1	2	3	5	5	11	17	30		
Hernia.....				2	1	1	1		2	2	5	1	10	8	18		
Intussusception.....	2	1			1	3	1		1	1			7	3	10		

TABLE B—Continued.

CLASS FOUR—DEVELOPMENTAL.	1896.			1897.									Color.			Total.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Colored.			
													White.	Colored.		
ORDER ONE—CHILDREN.																
Birth, premature.....	10	4	5	9	7	5	2	8	4	18	11	6	MALE.	FEM.	89	
Cyanosis.....		2			3	1	1	1	2	1	2	1	51	36	2	
Malformation.....		1				1							5	9		
Malnutrition.....								2		4	1	5	1	1	2	
Total.....	10	7	5	9	10	7	3	11	6	23	14	12	64	45	8	
ORDER TWO—WOMEN.																
Parturition.....	2		2	3	1		2	2	2	1				15		
Postpartum hemorrhage.....		1		2	2	1	2	2	1	1		2		11	1	
Puerperal eclampsia.....		1	2	2	1		1		1	1	3			14		
Total.....	2	2	4	7	4	1	5	4	4	3	3	2		40	1	
ORDER THREE—OLD AGE.																
Old age.....	32	35	45	45	45	58	52	46	37	57	58	54	262	291	4	
Total.....	32	35	45	45	45	58	52	46	37	57	58	54	262	291	7	
ORDER FOUR—NUTRITION.																
Asthenia.....		1			1		1	1					2	2		
Debility.....		6	4	6	3	4	9	4	10	10	5	4	39	32	1	
Exhaustion.....	13	7	7	12	16	15	9	6	12	11	15	7	57	71	2	
Marasmus.....	4	4	6	5	2	4	2	2	6	5	11	9	35	25		
Total.....	24	18	17	23	22	23	21	13	28	26	31	20	133	130	3	

TABLE B—Continued.

CLASS FIVE—ACCIDENTS.	1896.			1897.									Color.		Total.		
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	White.	Colored.			
ORDER ONE—ACCIDENTS.																	
Accidents.....	36	30	30	43	29	24	25	37	33	51	36	33	287	102	15	3	407
Accidents, railroad.....	6	5	4	2	2	3	5	3	7	5	4	4	40	10	1	.....	50
Burning.....	.....	3	3	7	3	3	1	2	2	2	2	5	17	17	.....	.....	35
Drowning.....	6	.....	.....	.....	1	4	7	8	12	7	1	8	46	7	.....	.....	53
Insolation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	1	.....	25	3	.....	.....	28
Lightning.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	2
Poison.....	4	.....	2	3	2	1	6	2	3	3	3	4	20	11	1	.....	32
Shooting.....	2	2	7	4	.....	2	2	2	2	4	3	3	26	3	1	.....	30
Total.....	54	40	46	59	38	35	46	52	61	100	57	49	463	153	18	3	637
ORDER THREE—HOMICIDE.																	
Homicide.....	2	.....	1	.....	.....	1	3	4	.....	.....	.....	6	14	1	1	1	17
Total.....	2	.....	1	.....	.....	1	3	4	.....	.....	.....	6	14	1	1	1	17
ORDER FOUR—SUICIDE.																	
Drowning.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	1	.....	.....	3
Hanging.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2	.....	.....	6
Poison.....	3	1	1	1	1	2	4	4	1	2	2	2	9	10	3	.....	19
Shooting.....	.....	1	1	1	1	9	7	7	3	2	1	.....	3	3	2	.....	8
Suicide.....	5	8	9	2	4	9	7	7	2	10	6	5	56	18	.....	.....	74
Total.....	10	10	11	3	5	11	13	11	6	14	9	7	74	34	2	.....	110
UNKNOWN AND UNCLASSIFIED.																	
Unknown.....	47	32	34	64	68	37	56	46	38	29	21	27	210	280	5	4	499
Unclassified.....	19	61	51	56	65	41	73	78	69	71	39	28	367	221	31	32	651
Total.....	66	93	85	120	133	78	129	124	107	100	60	55	577	501	36	- 36	1,150

TABLE C

Deaths, Showing Nationality and Social Relations, Year Ending September 30, 1897.

CLASS ONE—ZYMOTIC DISEASES.	NATIONALITY.				CONDITION.					
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
ORDER ONE—MIASMATIC.										
Anthrax.....	5	8			2	7			2	
Chill, congestive.....	202	171			112	171			5	
Cholera infantum.....	7	1		1	3				2	
Cholera morbus.....	108	110			21	112			22	2
Croup.....	31	17			6				2	
Diarrhea.....	320	342	2	5	21	341			22	5
Diphtheria.....	155	181	7	5	4	137			2	
Dysentery.....	30	24			1	25			2	
Enterocolitis.....	22	15	7	3	1	9			18	5
Erysipelas.....	12	9			2	10			1	
Fever, catarrhal.....					1				2	
Fever, cerebro-spinal.....					1				1	
Fever, congestive.....	36	55			1	25			20	
Fever, malarial.....		27	3	2					30	
Fever, puerperal.....		8	1	3		3			3	
Fever, remittent.....	5	38				37			1	
Fever, scarlet.....	16	287	15	15		154			2	
Fever, typhoid.....	308	287	1	1	8	2			102	
Fever, typho-malaria.....	11	6	1	1		6			3	
Gangrene.....	15	12			3	3			10	
La grippe.....	78	83	10	12	2	20			45	
Measles.....	44	41			4	34			2	
Pertussis.....		3			1	1			7	
Peritonitis, puerperal.....	38	63			2	63			39	
Pyemia.....	33	48	1	4	6	12			16	
Septicæmia, puerperal.....	38	38		5	1	4			37	
Total.....	1,476	1,587	50	60	58	1,178	313	327	62	99
										43
										189

TABLE C—Continued.

CLASS ONE—ZYMOTIC DISEASES.	NATIONALITY.						CONDITION.							
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.	NOT REPORTED.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.				
ORDER TWO—ENTHETIC.														
Syphilis	3	4	1	.....	.....	2	3	3	.....	1	1	.....	.....	2
Total	3	4	1	.....	.....	2	3	3	.....	1	1	.....	.....	2
ORDER THREE—DIETETIC.														
Delirium tremens	4	.....	.....	8	9	10	2	.....	2	14	1	19	4	6
Insanitation	183	155	5	.....	.....	.....	180	134	12	6	6	.....	9	.....
Intemperance	12	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Purpura .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	199	155	7	8	10	10	182	134	20	14	7	19	13	6
ORDER FOUR.														
Hydrophobia.....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Total	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....

TABLE C—Continued.

CLASS TWO—CONSTITUTIONAL.	NATIONALITY.				CONDITION.					
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.
ORDER ONE—DIATHETIC.										
Anemia.....	7	17	.....	.....	1	11	.....	2	.....	2
Cancer.....	116	204	32	33	50	157	24	22	76	29
Dropsy.....	42	52	9	13	5	21	5	13	35	9
Gout.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leucocythæmia.....	25	1	2	3	2	1	.....	.....	.....	.....
Rheumatism.....	.....	19	2	3	3	14	5	2	3	1
Total.....	190	233	43	49	14	204	38	39	114	41
ORDER TWO—TUBERCULAR.										
Hydrocephalus.....	4	3	.....	.....	1	.....	4	.....	1	.....
Meningitis, tubercular.....	24	24	.....	.....	.....	6	17	.....	1	2
Phthisis.....	704	984	73	39	96	458	381	74	104	138
Scrofula.....	5	7	.....	.....	.....	1	4	.....	69	.....
Tuberc. mesenterica.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Total.....	737	1,018	73	39	97	466	406	74	105	140

TABLE C—Continued.

CLASS THREE—LOCAL DISEASES.	NATIONALITY.				CONDITION.									
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.	NOT REPORTED.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.			Male.	Female.
ORDER ONE—NEUROUS.														
Apoplexy.....	113	95	33	24	10	7	15	9	98	43	37	66	6	8
Brain abscess.....	2	2					1			2			1	
Brain congestion.....	40	26			2	2	31	20	59	2	3	5	2	2
Brain disease.....	118	85	11	12	5	12	61	50	7	35	13	14	1	10
Brain fever.....	22	22		2		1	6	20				1	2	2
Brain softening.....	16	15	4		1	3	3	1	15	7	3	8	1	1
Cerebral hemorrhage.....	18	15	3	4	1	2	4	12	3	7	3	6	1	1
Cerebritis.....	22	16	3			1	18	12	2	7	3	3	1	1
Convulsions.....	109	109			7	13	124	108	15	7	15	1	1	1
Epilepsy.....	17	18	1			1	15	15	3	2	2	2	3	3
Insanity.....	6	9	2	1	1		7	2	6					
Locomotor ataxia.....	6	3	2											
Meningitis.....	177	155	5	2	8	9	166	127	21	16	2	3	3	19
Meningitis, cerebral.....	24	27	3		1	1	25	23	3	4		1	1	1
Meningitis, spinal.....	26	27	1		1	1	24	26	2	1	1	1	2	2
Myelitis.....	1	1	1				2	1	4	5	1	2		1
Nervous prostration.....	6	8			1	1				1	1			
Neuralgia.....	3	3												
Neurasthenia.....	2	2												
Paralysis.....	172	165	37	29	15	19	30	21	125	79	48	96	21	17
Spina bifida.....	5	4					5	9	4					
Spine, disease of.....	9	12	1	1	2	1	9	9	1	3	1			2
Spinal sclerosis.....	2	3								1				3
Tetanus.....	9	10	2				7	9	4	1				2
Total.....	916	832	109	75	56	74	553	466	871	228	118	215	39	72

ORDER TWO—CIRCULATORY.

Congestion.....	7	5	4	1	.....	6	3	4	1	1	2	.....	35
Heart disease.....	469	357	86	68	40	147	96	314	198	106	138	48	1
Hemorrhage.....	22	31	2	1	5	11	10	14	19	1	5	3	.....
Total.....	498	393	92	70	60	164	109	332	218	108	143	46	36
ORDER THREE—RESPIRATORY.													
Asthma.....	30	22	10	8	2	11	4	25	15	5	11	1	2
Bronchitis.....	111	125	12	16	2	71	83	32	32	9	31	13	14
Catarrh.....	10	10	.....	2	1	4	4	7	2	.....	5	.....	1
Emphysema.....	2	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Hæmoptysis.....	19	10	.....	1	3	18	11	4	1	.....	1	.....	1
Laryngitis.....	4	6	.....	1	.....	1	2	3	2	.....	2	.....	1
Lungs, abscess.....	31	32	.....	4	1	21	24	5	10	4	5	.....	2
Lungs, congestion.....	37	25	6	.....	2	19	13	22	9	2	4	2	2
Lungs, disease.....	.....	5	.....	.....	.....	.....	4	.....	1	.....	.....	.....	.....
Pharyngitis.....	.....	3	.....	.....	.....	.....	3	3	.....	.....	.....	.....	.....
Pleuritis.....	3	3	1	.....	.....	1	266	223	154	51	90	34	39
Pneumonitis.....	518	472	64	42	51	325	4	.....	.....	.....	.....	.....	.....
Pneumonitis, broncho.....	4	8	.....	.....	.....	4	6	1	3	.....	.....	.....	.....
Pneumonitis, catarrhal.....	6	9	.....	1	.....	6	6	2	.....	.....	3	.....	.....
Pneumonitis, pleuro.....	2	4	.....	.....	.....	.....	1	2	.....	.....	1	.....	.....
Pneumonitis, typho.....	5	2	.....	.....	1	2	2	3	.....	.....	.....	.....	.....
Total.....	182	733	93	74	63	483	428	334	231	71	153	50	62

ORDER FOUR—DIGESTIVE.

Appendicitis.....	25	11	2	.....	2	3	.....	9	2	.....	2	3	1
Bowels, catarrh.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bowels, congestion.....	9	10	2	2	2	3	4	4	7	4	2	2	1
Bowels, disease of.....	58	55	5	7	6	37	28	25	20	5	16	2	4
Bowels, hemorrhage.....	.....	2	1	.....	2	1	.....	.....	2	.....	1	.....	.....
Bowels, obstruction.....	15	24	1	3	3	6	6	6	12	3	8	3	1
Bowels, ulceration.....	3	1	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Colitis.....	8	12	.....	.....	.....	6	10	1	2	1	.....	.....	.....
Dyspepsia.....	.....	.....	.....	.....	.....	3	3	.....	.....	.....	.....	.....	.....
Enteritis.....	40	36	2	2	1	33	23	6	5	4	4	4	7
Gall stones.....	2	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastritis.....	41	32	8	13	3	16	10	30	19	5	17	1	2
Gastro-enteritis.....	13	25	1	.....	2	10	18	5	6	2	.....	.....	1
Hepatitis.....	12	13	1	1	3	5	5	7	6	.....	4	1	1
Hernia.....	10	5	.....	2	1	6	.....	4	5	.....	2	.....	7
Intussusception.....	7	3	.....	.....	.....	4	2	2	1	1	.....	.....	1
Jaundice.....	8	5	1	1	2	4	2	4	2	3	2	.....	.....

ORDER EIGHT—INTEGUMENTARY.														
Abscess	19	15	.....	1	3	.....	13	3	7	9	.....	3	2	1
Total	19	15	.....	1	3	.....	13	3	7	9	.....	3	2	1
ORDER NINE—MISCELLANEOUS.														
Tumor	13	32	3	2	.....	6	3	9	10	19	3	7	.....	5
Total	13	32	3	2	.....	6	3	9	10	19	3	7	.....	5

TABLE C—Continued.

CLASS FOUR— DEVELOPMENTAL.	NATIONALITY.				CONDITION.									
	AMERICAN.		FOREIGN.		NOT REPORTED.		SINGLE.		MARRIED.		Widower.	Widow.	NOT REPORTED.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.			Male.	Fem.
ORDER ONE—CHILDREN.														
Birth, premature.....	53	36					53	36						
Cyanosis.....	5	9					5	9						
Malformation.....	2						2							
Malnutrition.....	7		5				12							
Total.....	67	45	5				72	45						
ORDER TWO—WOMEN.														
Parturition.....		12		2		1		1				1		
Postpartum hemorrhage.....		11		1				4						
Puerperal eclampsia.....		13		1										
Total.....		36		4		1		5				1		
ORDER THREE—OLD AGE.														
Old age.....	180	214	67	49	19	35	12	14	101	59	121	206	32	19
Total.....	180	214	67	49	19	35	12	14	101	59	121	206	32	19
ORDER FOUR—NUTRITION.														
Asthenia.....	2	2					1	1	1			1		
Debility.....	30	22				2	11	5	14			20	2	1
Exhaustion.....	48	51	7	8	6	12	34	37	15	17	13	12	5	5
Marasmus.....	34	24	1	1			32	16	3	2	5	4	3	3
Total.....	114	99	13	17	9	14	78	59	33	25	18	37	7	9

TABLE D—Continued.

CLASS TWO—CONSTITUTIONAL.	Under 1		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		Over 100.		Not Reported.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
ORDER ONE—DIATHETIC.																																
Anemia.....	1						1	1	1		2	5		4	1	1	1	1	1												2	
Cancer.....		1					2		1		1	9	5	29	24	51	31	63	43	44	20	37	14	11							14	39
Dropsy.....		2					1		1		1	2	3	2	12	7	8	20	13	8	2	5								1	10	
Goitre.....																																
Leucocythemia.....																				1												
Rheumatism.....	1	1			3	1	2	2	1		4			5		2	1	4	8	1	5	2							4	2		
Total.....	2	4	3	5	2	4	3	4	2	4	8	16	8	40	27	66	39	76	67	72	40	50	19	16	2			19	53			
ORDER TWO—TUBERCULAR.																																
Hydrocephalus.....	3	1	1								1																		1			
Meningitis, tubercular.....	7	3	6	6	4	3	1	2			1	2	3	1	2	2	1	2	1		2								1			
Phthisis.....	17	26	21	17	5	13	5	39	60	137	238	332	189	201	126	127	79	60	52	38	36	38	3	6	1			41	67			
Scrofula.....	2	2	1	2							2																					
Tubercles, mesenterica.....																																
Total.....	29	32	29	26	9	16	6	41	60	137	241	335	192	205	126	129	90	62	52	39	36	40	3	6	1			43	67			

TABLE D—Continued.

CLASS THREE—LOCAL DISEASES.																																		
Under 1		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		Over 100.		Not Re-ported.						
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
ORDER ONE—NERVOUS.																																		
Apoplexy.....																																		
1																																1	13	
Brain abscess.....																																		
15	10	5	4	3	1	1																									2	4		
Brain congestion.....																																		
23	25	13	9	5	7																										4	10		
Brain fever.....																																		
3	7	1	2	4																														
Brain softening.....																																		
7	1	1																																
Cerebral hemorrhage.....																																		
2	5	3																																
Cerebritis.....																																		
6	5	3																																
Convulsions.....																																		
102	95	14																														2	3	
Epilepsy.....																																		
2	2																															5	1	
Insanity.....																																		
1																																		
Locomotor ataxia.....																																		
Meningitis.....																																		
89	63	36	56	13	12	9	4																									6		
Meningitis, cerebral.....																																		
7	7	8	6	2	4	2	2	2	3	4	2	3	4																			2	1	
Meningitis, spinal.....																																		
6	7	10	11	4																														
Myelitis.....																																		
Nervous prostration.....																																		
Neuralgia.....																																		
Neurasthenia.....																																		
1	3	5	3	2	1	1	1	2	5	3	11	9	29	14	31	24																1		
Paralysis.....																																		
5	4	1	2	2																														
Spina bifida.....																																		
1	4	1	2																															
Spina, disease of.....																																		
Spinal sclerosis.....																																		
Tetanus.....																																		
1	3																																	
Total.....																																		
261	239	99	113	33	37	16	18		21	26	49	43	53	43	92	49	107	74	118	103	142	126	51	59	1	1					38		50	
ORDER TWO—CIRCULATORY																																		
Congestion.....																																		
1	2																																3	2
Heart disease.....																																		
35	15	3	8	3	7	10	16	15																									46	9
Hemorrhage.....																																		
6	4																																20	
Total.....																																		
42	21	3	8	4	7	11	16	15	9	24	37	46	49	57	95	71	158	93	40	190	34	45	1								49	31		

TABLE D—Continued.

CLASS THREE—LOCAL DISEASES.		Under 1		1 to 5,		5 to 10,		10 to 15,		15 to 20,		20 to 30,		30 to 40,		40 to 50,		50 to 60,		60 to 70,		70 to 80,		80 to 90,		90 to 100,		Over 100,		Not Re-ported.		
		M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	
ORDER THREE—RESPIRATORY.																																
Asthma.....	1	3																													1	12
Bronchitis.....	51	47	15	30	3	3		2	1	1	2	4	5	3	5	3	3	7	10	14	17	22	3	11	1	1				9	1	
Catarrh.....	3	2	1																													
Emphysema.....																																
Hæmoptysis.....																																
Laryngitis.....	3	4	9	6	4	2	1	1				2	1	1	2	2	1	1	1	1												
Lungs, abscess.....																																
Lungs, congestion.....	10	16	4	5	1	3	2		2	2	1	2	2	6	1	3	1	2	4	5	4	8	1	2	1	1				2	2	
Lungs, disease.....	7	9	2	4	2																											
Pharyngitis.....																																
Pleuritis.....																																
Pneumonitis.....	123	114	76	83	16	28	10	11	15	19	64	43	46	37	50	39	47	32	67	48	57	46	30	19					32	29		
Pneumonitis, broncho.....	2	2	1	2		2																										
Pneumonitis, catarrhal.....	2	4	4	2																												
Pneumonitis, pleuro.....																																
Pneumonitis, typho.....	1		1	1		1					1																					
Total.....	203	198	116	135	27	45	14	16	20	24	71	55	64	43	68	51	73	52	98	81	100	91	38	37	2	1			44	45		
ORDER FOUR—DIGESTIVE.																																
Appendicitis.....	1		1		1						12	4	3	1	2			2	1		1									1		
Bowels, catarrh.....																																
Bowels, congestion.....	1		1	2																												
Bowels, disease of.....	2	3	2	2						1	1	1	1	2	1	4	9	5	6	10	5	5	4	4						5	1	
Bowels, hæmorrhage.....	16	14	6	8				1	3	1	8	6	2	5	3	2	2	3	3	7	3	3	1	1	4					1	2	
Bowels, obstruction.....	4	1	2	2	1	1				1	1	1	1	2	1	4	2	3	3	7	3	3	1							1	1	
Bowels, ulceration.....																																
Colitis.....	5	2	2	5		1																										
Dyspepsia.....																																
Enteritis.....	1	9	10	8				1	1	2	5	1	2	1	2	3	2	1	3	2	3	2	2						1	4	14	
Gall stones.....																																
Gastritis.....	7	2	5	3							3	6	2	5	1	2	6	2	12	11	5	11	5	3					3	2	2	
Gastro-enteritis.....	5	6	2	8	1	1					1	1	2	2	1	3	1	1	6											1	1	
Hepatitis.....																																
Hernia.....	3																															

TABLE D—Continued.

	Under 1		1 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 to 100.		Over 100.		Not Re-ported.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
CLASS FOUR—DEVELOPMENTAL.																															
ORDER ONE—CHILDREN.																															
Birth, premature.....	53	36																													
Cyanosis.....	5	9																													
Malformation.....	2																														
Malnutrition.....	12																														
Total.....	72	45																													
ORDER TWO—WOMEN.																															
Parturition.....											8		5																	2	
Postpartum h'morrhage.....											5		2																	3	
Puerperal eclampsia.....										3	4		5																		
Total.....									3	17		12		4																5	
ORDER THREE—OLD AGE.																															
Old age.....																		25	13	100	79	119	117	19	23	2	2	1	64		
Total.....																	25	13	100	79	119	117	19	23	2	2	1	64			
ORDER FOUR—NUTRITION.																															
Asthenia.....	1	1															1				1										
Debility.....	26		1		2				1						1		1		8		15	18	7	9	1				1		
Exhaustion.....	2	35	2	3	1				1		1	4	5	6	4	1	4	7	5	4	6	3	4	1	1				1	1	
Marasmus.....	24	15	3	1					2				1		1		1	2	2	2			1						1		
Total.....	53	51	5	4	2	4	2		4	1	4	6	6	6	7	6	17	11	21	25	10	14	2	1				3	1		

TABLE A.

Births by Months. Color and Nationality of Parents for the Year Ending September 30, 1897.

COUNTIES.	1896.		1897.									Total.	COLOR.				NATIONALITY.				NOT RE- PORTED.				
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.		September.	Males.	Females.	WHITE.		COLOR'D		Fathers.			Mothers.	Fathers.	Mothers.
																Males.	Females.	Males.	Females.						
Adams.....	59	36	28	35	29	38	39	23	33	41	42	34	231	205	436	231	205	231	205	349	372	35	15	45	98
Allen.....	38	36	36	102	78	52	70	50	83	114	114	53	420	423	843	419	421	419	421	518	540	197	153	116	98
Bartholomew.....	65	43	28	44	29	46	34	45	32	38	38	56	255	252	507	257	248	257	248	417	432	17	16	70	63
Benton.....	15	16	16	20	18	13	21	14	13	13	12	21	127	87	214	127	87	127	248	182	192	22	19	19	19
Blackford.....	9	6	5	12	7	12	15	15	6	5	12	2	48	58	106	48	58	48	58	81	82	6	5	19	19
Boone.....	37	36	42	53	47	39	52	42	50	53	16	46	289	284	553	289	283	289	283	430	428	4	.....	123	119
Brown.....	27	14	14	5	15	13	12	22	17	15	13	12	186	183	363	186	183	186	183	133	133	.....	36	100	111
Carroll.....	28	13	15	65	29	19	90	26	31	31	12	12	187	169	346	169	159	187	241	230	16	.....	100	111	
Cass.....	20	24	24	20	19	13	24	26	24	26	34	34	167	130	297	166	130	166	263	261	25	27	6	14	14
Clark.....	22	23	23	23	30	25	12	17	7	12	18	11	125	99	224	111	82	111	77	77	.....	.....	14	14	14
Clay.....	37	45	45	28	24	22	41	35	54	43	43	46	214	213	427	208	212	208	370	389	50	34	3	.....	.....
Clinton.....	15	16	8	8	17	15	21	31	27	14	15	9	98	82	180	98	82	98	175	174	.....	1	.....	.....	.....
Crawford.....	7	9	8	10	17	5	9	6	16	10	12	12	55	54	108	55	54	55	109	109	.....	.....	18	7	7
Daviess.....	36	44	23	28	34	37	14	33	33	33	45	22	219	173	382	147	171	147	361	375	11	8	18	.....	.....
Dearborn.....	34	14	21	26	20	29	24	26	20	26	20	22	149	127	276	219	127	219	239	250	22	17	13	.....	.....
Decatur.....	20	16	16	26	33	32	20	9	15	9	25	31	126	126	252	126	125	126	210	211	3	3	35	34	34
Dekalb.....	21	20	12	26	27	24	22	20	19	18	18	24	131	134	265	131	134	131	192	199	19	15	51	48	48
Delaware.....	90	59	36	61	74	45	97	60	67	72	103	72	446	380	836	442	384	442	752	752	49	15	24	17	17
Dubuque.....	42	36	48	47	41	28	28	23	26	30	39	39	203	201	404	203	201	203	379	387	17	17	5	.....	.....
Elkhart.....	.....	.....	.....	59	41	18	67	57	54	.....	.....	.....	143	153	256	142	153	142	272	286	16	12	5	.....	.....
Fayette.....	20	9	9	18	13	7	17	14	12	18	16	18	100	104	204	93	100	93	193	196	3	3	5	2	2
Floyd.....	20	14	25	27	24	25	17	14	12	13	9	8	78	89	167	74	86	74	152	162	8	8	46	29	29
Fountain.....	53	30	22	42	24	20	20	27	20	27	40	27	196	172	370	196	172	196	270	311	44	20	46	19	19
Franklin.....	8	12	10	17	19	29	21	29	21	31	23	22	111	123	232	111	123	111	208	212	5	3	19	17	17
Fulton.....	17	6	7	10	12	13	17	13	36	36	32	5	120	112	232	120	112	120	214	219	.....	2	16	.....	.....

Gibson.....	82	49	38	57	26	13	106	28	34	67	46	57	318	285	603	308	281	10	4	566	576	10	9	23	14
Grant.....	11	9	43	19	20	18	35	21	28	35	42	19	113	105	386	119	104	3	1	201	321	6	6	8	1
Greene.....	17	8	25	42	33	44	54	40	28	54	59	54	219	167	336	210	167	2	4	317	321	10	3	55	55
Hamilton.....	47	28	32	41	28	42	35	25	36	64	14	45	230	172	349	175	230	2	4	421	340	12	8	12	3
Hancock.....	41	50	32	41	28	42	35	25	36	64	14	45	230	172	349	175	230	2	4	421	340	12	8	12	3
Harrison.....	47	37	17	31	12	25	40	19	10	37	25	15	175	140	315	171	135	4	5	312	312	10	1	1	1
Hendricks.....	40	24	20	27	23	42	54	27	34	36	23	31	186	168	386	184	167	5	4	344	349	9	5	5	5
Henry.....	39	34	34	48	38	42	54	27	34	36	23	31	186	168	386	184	167	5	4	457	466	9	5	5	5
Howard.....	26	26	35	27	31	30	16	24	25	25	35	27	156	152	308	155	151	1	1	301	299	6	8	1	1
Huntington.....	31	35	35	27	31	31	21	25	25	25	35	27	211	161	372	211	161	1	1	365	368	5	1	1	1
Jackson.....	6	18	14	28	28	27	31	19	13	25	19	11	113	128	289	113	125	1	1	148	151	4	1	83	83
Jay.....	11	13	8	14	9	14	30	12	11	30	12	7	86	75	161	86	75	1	1	135	142	5	5	12	12
Jay.....	35	23	33	33	23	61	47	31	38	39	34	26	214	215	429	214	214	1	1	400	404	13	12	9	9
Jefferson.....	9	8	16	16	16	1	27	10	9	8	13	15	87	74	161	86	73	1	1	144	153	3	2	9	5
Jennings.....	12	16	5	15	16	14	14	2	9	8	13	15	87	74	161	86	73	1	1	109	112	3	2	9	5
Johnson.....	40	35	8	36	28	25	24	20	9	30	21	29	180	126	306	179	124	1	2	300	302	15	4	4	2
Knox.....	39	27	11	20	35	16	69	16	28	47	42	19	163	171	334	157	166	6	5	191	189	15	15	130	130
Kosciusko.....	55	25	32	20	17	20	69	34	28	47	42	19	163	171	334	157	166	6	5	345	349	2	2	54	50
Lagrange.....	15	9	17	12	12	20	16	20	12	21	12	13	136	86	179	93	86	1	1	163	170	5	1	9	6
Lake.....	15	9	17	12	12	20	16	20	12	21	12	13	136	86	179	93	86	1	1	242	214	40	51	5	22
Laporte.....	50	40	41	46	56	46	56	44	40	53	63	59	324	270	594	324	270	1	1	370	417	199	162	18	8
Lawrence.....	37	26	26	33	32	35	25	28	33	180	112	48	206	173	379	205	172	1	1	256	261	8	3	115	115
Madison.....	43	30	75	112	86	94	298	242	258	303	301	287	468	459	925	461	455	5	4	788	828	111	77	14	8
Marion.....	245	254	283	308	251	310	222	288	242	258	303	287	1,710	1,640	3,400	1,566	1,563	144	127	2,554	2,789	579	471	224	97
Marshall.....	35	26	22	24	20	22	38	20	27	20	11	17	151	129	280	151	129	1	1	267	268	10	8	224	97
Martin.....	35	26	22	24	20	22	38	20	27	20	11	17	151	129	280	151	129	1	1	267	268	10	8	224	97
Miami.....	40	35	8	46	56	46	56	44	40	53	63	59	324	270	594	324	270	1	1	370	417	199	162	18	8
Monroe.....	3	1	3	13	10	16	11	7	9	12	13	11	49	53	102	49	53	1	1	81	84	8	5	21	18
Montgomery.....	4	24	20	19	25	26	32	39	23	18	13	11	67	55	152	185	172	2	2	85	97	8	5	17	8
Morgan.....	62	23	22	37	31	31	32	38	23	31	38	40	187	172	359	240	218	3	3	227	231	1	1	123	125
Morgan.....	34	23	35	17	31	31	32	38	23	31	38	40	187	172	359	240	218	3	3	444	456	4	2	10	10
Morgan.....	23	9	13	10	15	16	15	12	25	23	25	25	145	140	285	145	138	2	2	266	258	17	13	19	27
Newton.....	23	9	13	10	15	16	15	12	25	23	25	25	145	140	285	145	138	2	2	138	148	17	13	62	56
Noble.....	3	5	5	6	2	4	4	1	1	11	8	16	38	27	63	36	32	1	1	62	61	1	2	1	1
Ohio.....	11	4	1	17	7	8	32	9	11	20	12	11	42	42	74	42	37	1	1	71	73	1	1	1	1
Orange.....	26	20	32	18	31	30	31	26	18	11	33	33	148	148	317	146	169	2	2	312	312	9	5	3	3
Parke.....	16	11	11	27	17	16	20	17	10	21	19	18	118	85	203	118	84	1	1	191	196	9	5	3	3
Perry.....	26	11	11	27	17	16	20	17	10	21	19	18	118	85	203	118	84	1	1	191	196	9	5	3	3
Pike.....	21	15	13	6	9	9	16	16	3	5	5	5	39	55	94	39	55	1	1	91	91	1	1	2	1
Porter.....	22	15	16	18	18	25	37	16	16	19	11	7	94	94	188	94	94	1	1	160	161	28	27	10	1
Posey.....	37	23	52	56	35	35	57	37	36	44	37	28	225	216	430	217	208	8	8	412	430	16	16	15	16
Pulaski.....	42	29	37	58	33	33	53	32	36	44	44	32	260	197	427	229	198	1	2	106	110	18	18	15	16
Putnam.....	42	29	37	58	33	33	53	32	36	44	44	32	260	197	427	229	198	1	2	106	110	18	18	15	16
Randolph.....	76	43	76	60	46	27	80	60	36	57	37	48	332	306	640	328	308	4	4	626	633	1	1	4	4

TABLE A—Continued.

COUNTIES.	1886.		1897.									Color.				Nationality.				Not Re- ported.							
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	Males.	Females.	Total.	White.		Color'd				American.		Foreign.			
																Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Ripley	18	7	30	32	20	31	30	32	25	23	20	288	151	137	288	151	136	151	136	45	45	1	1	242	242		
Rush	38	25	11	30	20	20	30	30	24	23	20	300	154	160	300	154	134	154	134	243	243	6	6	4	4		
Scott	25	11	30	30	26	9	27	27	25	25	26	85	37	48	85	37	48	85	37	85	85	1	1	5	5		
Shelby	27	38	22	30	37	59	12	7	38	37	22	306	204	191	306	204	183	204	183	381	381	6	6	9	9		
Spencer	35	41	35	25	23	36	25	24	23	23	28	399	211	217	399	211	174	211	174	383	383	1	1	9	9		
Starke	9	9	11	11	20	15	7	8	3	3	4	108	53	55	108	53	55	108	53	81	81	16	16	8	7		
Steuben	30	21	14	15	14	21	14	15	18	11	19	105	110	110	105	110	110	105	110	106	106	2	2	107	111		
St. Joseph	50	34	26	43	30	32	32	18	69	28	16	203	193	202	203	193	193	202	193	263	263	119	106	69	69		
Sullivan	15	15	8	46	34	49	37	38	46	43	48	253	223	224	253	223	223	223	223	384	384	6	4	27	27		
Switzerland	17	6	9	7	10	3	15	14	4	4	11	119	58	61	119	58	61	119	58	92	92	6	4	27	27		
Tippecanoe	30	22	24	35	23	20	35	23	28	34	19	324	161	160	324	161	156	324	161	243	245	67	49	14	30		
Tipton	17	23	64	37	30	21	12	38	28	22	23	182	93	182	182	93	182	182	93	341	349	3	1	9	3		
Union	1	7	7	8	10	8	12	4	9	9	12	82	41	51	82	41	51	82	41	90	90	148	148	2	2		
Vanderburgh	184	104	63	158	87	64	138	70	83	126	90	116	691	587	637	548	54	637	548	1,021	1,101	209	148	45	26		
Vermillion	2	2	8	15	13	15	8	15	12	25	26	21	90	76	166	90	76	166	90	148	151	4	3	14	12		
Vigo	113	81	63	114	68	44	87	65	30	91	66	75	456	441	442	442	418	442	418	723	758	104	69	60	60		
Wabash	...	...	...	21	19	17	30	22	16	41	22	23	106	105	106	106	106	106	106	207	206	2	3	...	...
Warren	...	...	...	4	9	5	10	14	12	...	...	...	37	33	37	33	...	37	33	68	67	1	...	...	...
Warrick	30	29	25	19	21	10	13	13	9	26	13	9	113	104	113	100	...	113	100	159	155	...	...	56	60
Washington	10	14	7	10	6	2	17	5	9	10	7	...	54	49	54	49	...	54	49	49	49	...	...	54	54
Wayne	60	56	55	65	63	54	50	54	50	60	56	46	326	343	343	343	331	343	331	613	636	39	24	12	4		
Wells	16	13	10	20	25	18	20	17	12	9	16	9	98	93	98	93	98	93	98	179	185	2	2	10	4		
White	19	20	10	23	15	4	11	4	4	5	4	1	80	77	80	77	...	80	77	13	13	...	...	144	139
Whitley	7	11	34	7	2	18	5	11	5	4	20	4	56	49	56	49	...	56	49	99	101	2	...	2	2		
Total	2,968	2,537	2,373	3,175	2,600	2,347	3,082	2,419	2,331	3,182	2,792	2,638	16,717	15,457	16,366	15,227	351	330	351	26,715	27,626	2,318	1,763	2,912	2,556		

*Births, Number of Children Born to Each Mother, Grouped Ages of Parents, Still, Plurality and Illegitimate Births,
Year Ending September 30, 1897.*

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TABLE B—Continued.

COUNTIES.	NUMBER OF CHILDREN BORN TO EACH MOTHER.													GROUPED AGES OF PARENTS.												Still-Births.		Puerility-Births.		Illegitimate-Births.			
	Total.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Eleventh.	Twelfth and Over.	Not Reported.	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		Not Reported.				
															Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	
	603	169	126	104	59	47	37	21	16	12	3	2	3	4	2	44	247	351	232	160	86	30	11	..	..	..	21	14	13	8	4	2
Grant.....	218	58	49	29	27	13	11	12	5	3	12	4	1	5	2	24	97	127	81	52	27	9	9	..	..	..	21	3	4	4	2	4
Greene.....	386	103	69	62	42	38	26	14	10	7	3	4	2	8	4	35	176	196	118	84	43	23	8	4	2	1	2	4	7	3	6		
Hamilton.....	349	88	64	60	35	28	28	20	9	4	4	5	1	3	4	42	180	189	116	101	66	21	7	..	..	18	7	3	3	1	1	1
Hancock.....	450	118	98	75	42	35	31	21	12	5	3	5	2	3	4	45	190	242	161	129	66	21	7	..	..	5	9	2	1	1	1	1
Harrison.....	315	83	70	48	38	17	22	12	4	10	4	4	3	..	3	34	134	177	116	86	44	15	8	..	..	2	1	7	4	3	3	3
Hendricks.....	354	101	86	61	35	28	16	14	2	5	2	3	1	7	4	4	203	242	166	130	74	24	10	..	..	11	4	6	2	2	6	6
Henry.....	475	124	110	65	56	34	28	22	12	11	3	2	1	7	4	41	202	272	166	130	74	24	10	..	..	68	3	3	1	1	1	1
Howard.....	308	74	66	64	38	24	22	6	6	4	4	..	..	..	1	13	150	153	73	63	16	6	..	..	..	25	23	4	4	..	..	..
Huntington.....	372	104	76	50	46	36	16	30	8	4	2	..	..	..	11	64	157	170	129	101	45	12	3	..	..	4	4	4	4	..	..	..
Jackson.....	239	66	85	25	37	28	18	9	5	7	1	2	2	4	7	18	73	79	43	45	26	10	2	1	83	8	3	3	5	4	4
Jasper.....	161	51	38	20	7	14	13	9	3	5	2	3	3	..	2	16	76	88	43	41	31	8	3	4	4	4	4
Jay.....	429	130	99	64	47	31	21	10	9	5	5	1	1	5	2	57	202	242	134	91	43	25	6	4	31	9	1	1	1	1	1
Jefferson.....	161	54	30	17	15	7	8	6	1	3	..	1	2	4	6	62	92	92	55	48	30	15	4	..	..	8	2	1	2	2	2	2
Jennings.....	113	31	22	15	15	23	16	7	6	4	2	2	2	2	3	16	44	57	38	40	45	17	3	..	..	1	3	1	1	1	1	1
Johnson.....	306	82	67	51	44	23	16	7	6	4	2	..	..	..	37	133	140	120	102	45	17	3	..	..	..	2	2	2	2	2	2	2
Knox.....	334	85	80	45	36	31	21	14	7	5	6	..	2	2	46	130	182	102	70	37	5	8	1	..	..	55	30	3	3	3	3	3
Kosciusko.....	407	115	104	58	45	34	16	9	10	7	1	1	5	9	11	167	217	143	112	61	32	8	1	..	..	25	30	6	6	6	6	6
Lagrange.....	179	50	39	35	22	9	11	4	5	3	3	1	..	2	11	175	88	61	31	28	8	..	..	..	1	17	14	1	1	1	1	1
Lake.....	238	51	46	54	51	41	21	8	7	3	10	7	3	6	144	157	93	64	28	8	..	..	..	..	..	3	3	3	3	3	3	3
Laporte.....	594	152	129	89	87	40	23	27	13	13	3	2	2	1	66	216	283	165	64	41	16	19	..	..	..	10	9	1	1	1	1	1
Lawrence.....	379	106	82	72	98	21	20	13	16	8	3	2	2	1	54	161	169	100	84	43	21	12	..	..	..	56	51	7	7	7	7	7
Madison.....	925	241	157	122	69	44	31	19	14	9	9	9	1	4	9	439	513	322	251	110	32	13	..	..	..	19	10	8	8	8	8	8
Marion.....	3,400	1,093	744	513	360	219	148	112	81	37	34	15	23	1	18	1,235	1,885	1,258	934	451	155	67	1	9	2	17	96	8	8	8	8	8	
Marshall.....	240	84	60	48	27	22	13	4	4	4	4	..	..	..	26	130	153	97	75	38	6	..	..	..	3	1	1	1	1	1	1	1
Martin.....	102	18	20	25	14	7	4	3	2	2	..	..	..	..	12	38	39	32	27	12	6	..	..	..	..	17	2	2	2	2	2	2
Miami.....	112	30	17	22	14	6	6	4	4	4	..	..	..	..	37	88	47	30	29	14	6	..	..	..	27	20	1	1	1	1	1	1
Monroe.....	359	103	68	45	37	31	19	20	16	4	6	3	2	5	37	82	107	58	39	21	13	11	178	158	2	2	2	2	2	2

TABLE C.

Marriages by Months, Color and Nationality for the Year Ending September 30, 1897.

COUNTIES.	1896.												1897.												COLOR.		NATIONALITY.						Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	October.			November.			December.			January.			February.			March.			April.			May.			June.			July.			August.			September.			White.	Colored.	AMERICAN.		FOREIGN.		NOT REPORTED.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.		Groom.	Bride.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
																																				Groom.			Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.	Groom.	Bride.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Adams	23	14	31	12	8	18	18	17	14	9	12	18	194	2	179	183	6	9	5	6	1	199	200	2	2	52	1	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Gibson.....	3	14	26	40	17	7	22	12	4	25	18	22	183	17	207	209	3	.....	1	210
Grant.....	36	33	41	37	42	43	68	37	25	25	42	45	467	7	461	470	13	.....	52	474
Greene.....	16	16	39	8	25	25	22	25	22	6	13	17	88	6	36	36	4	.....	81	48
Hamilton.....	19	17	15	12	24	8	13	15	14	14	21	20	273	1	194	197	2	.....	81	279
Hancock.....	17	16	15	12	9	8	13	15	14	14	21	25	181	1	179	180	2	.....	182	182
Harrison.....	17	16	30	16	9	16	16	12	9	19	18	20	188	7	195	195	2	.....	195	195
Hendricks.....	23	12	17	13	16	16	13	8	3	17	17	14	167	6	170	172	1	.....	173	173
Henry.....	27	15	18	23	21	21	15	8	11	12	17	21	207	1	200	204	1	.....	207	207
Howard.....	17	27	18	18	26	26	22	18	20	19	25	23	269	6	274	274	1	.....	275	275
Huntington.....	32	16	16	14	12	17	22	20	13	12	24	23	220	1	218	220	3	.....	221	221
Jackson.....	5	14	15	13	22	22	32	20	21	17	23	18	225	2	202	201	3	.....	227	227
Jasper.....	3	15	11	11	7	7	6	11	7	4	10	10	106	2	83	83	2	.....	104	104
Jay.....	27	22	26	19	24	22	33	24	21	26	21	34	285	2	281	291	16	.....	297	297
Jefferson.....	34	32	14	20	26	26	13	26	25	26	20	31	312	4	114	114	1	.....	312	312
Jennings.....	8	15	13	7	18	8	10	7	6	4	8	11	111	4	114	114	1	.....	115	115
Johnson.....	17	15	25	6	13	5	9	5	13	13	13	17	149	1	150	150	.....	.....	150	150
Knox.....	47	30	11	38	18	12	28	13	2	57	17	18	279	12	276	276	.....	.....	281	281
Kosciusko.....	35	26	14	25	23	12	25	10	18	19	20	26	288	.....	280	280	4	.....	288	288
Lagrange.....	15	14	13	7	11	12	13	12	4	6	9	5	121	.....	114	115	2	.....	121	121
Lake.....	39	46	54	30	27	33	30	43	36	.....	.....	.....	341	.....	242	246	96	.....	341	341
Laporte.....	34	33	22	13	20	22	23	22	22	17	14	29	270	1	290	218	51	.....	271	271
Lawrence.....	17	25	18	18	11	4	8	10	11	15	11	9	95	1	185	188	4	.....	183	183
Madison.....	62	82	80	49	59	32	17	25	26	13	12	20	191	2	501	517	7	.....	191	191
Marion.....	199	152	119	87	87	82	68	77	57	44	97	99	1,011	96	1,014	1,048	55	.....	1,011	1,011
Marshall.....	23	25	25	17	21	17	20	13	20	15	23	13	231	1	229	229	3	.....	232	232
Martin.....	16	28	22	13	14	4	8	10	11	15	11	9	95	.....	95	95	.....	.....	95	95
Miami.....	14	13	21	14	11	18	16	13	26	13	13	20	201	1	182	183	6	.....	202	202
Monroe.....	25	36	24	22	21	20	16	8	14	13	18	16	182	2	501	517	1	.....	184	184
Montgomery.....	19	14	21	21	19	19	8	14	14	28	20	27	288	3	270	270	1	.....	271	271
Morgan.....	3	6	5	2	15	22	5	16	5	.....	.....	.....	141	.....	141	141	3	.....	149	149
Newton.....	3	6	5	2	9	5	7	13	20	15	23	13	231	1	229	229	3	.....	157	157
Noble.....	22	21	17	14	15	9	21	8	4	12	13	16	172	.....	162	168	10	.....	172	172
Ohio.....	3	3	5	6	6	6	3	2	5	3	6	4	49	1	182	188	4	.....	182	182
Orange.....	9	9	15	12	5	5	14	11	11	10	17	16	154	.....	115	115	11	.....	154	154
Owen.....	10	32	28	15	10	14	14	18	16	10	6	15	199	2	127	128	1	.....	201	201
Parke.....	17	13	10	14	8	11	20	16	7	18	23	14	170	1	163	170	8	.....	171	171
Perry.....	13	18	14	7	11	9	10	9	3	17	31	20	161	1	162	162	.....	.....	162	162
Pike.....	13	18	14	7	11	9	10	9	3	17	31	20	161	1	162	162	.....	.....	162	162
Porter.....	12	9	4	25	10	6	3	9	17	5	32	8	123	.....	97	103	26	.....	123	123
Posey.....	17	17	9	8	17	23	10	17	30	24	25	18	211	27	280	286	8	.....	238	238
Pulaski.....	4	7	9	15	12	11	7	5	1	9	8	4	42	.....	82	87	8	.....	92	92
Putnam.....	32	23	19	21	19	11	14	10	9	10	14	18	211	4	213	213	1	.....	215	215
Randolph.....	22	23	41	18	20	19	14	15	17	25	21	27	261	1	260	261	2	.....	262	262

TABLE C—Continued. •

COUNTIES.	1896.			1897.								Color.		NATIONALITY.						Total.					
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	White.	Colored.	AMERICAN.		FOREIGN.		NOT REPORTED.						
															Groom.	Bride.	Groom.	Bride.	Groom.		Bride.	Groom.	Bride.	Groom.	Bride.
Ripley.....	16	17	17	11	12	11	15	15	12	12	10	9	14	159	3	138	138	159	159	159	159				
Rush.....	17	13	10	14	9	5	17	5	9	9	15	10	12	135	3	73	73	159	159	159	159				
Scott.....	20	22	9	18	14	17	27	20	14	18	24	15	15	156	4	157	159	207	207	207	207				
Shelby.....	18	29	18	14	18	17	27	3	17	15	19	15	15	195	15	207	207	207	207	207	207				
Spencer.....	1	3	8	5	4	2	10	8	8	10	3	9	9	71	15	68	69	69	69	69	69				
Starke.....																									
Steuben.....	14	18	3	15	10	15	12	10	12	22	5	5	15	151	2	150	149	149	149	149	149				
St. Joseph.....	55	42	20	21	25	21	30	19	41	55	27	34	34	388	2	303	319	319	319	319	319				
Sullivan.....	25	16	27	26	5	32	37	20	16	17	15	15	31	266	1	264	248	248	248	248	248				
Switzerland.....	17	16	11	11	9	15	10	9	17	9	16	11	11	145	5	148	150	150	150	150	150				
Tippecanoe.....	29	28	23	19	28	16	24	30	20	19	22	17	27	274	1	243	243	243	243	243	243				
Tipton.....	21	15	20	25	17	24	15	14	13	20	16	25	25	224	1	220	222	222	222	222	222				
Union.....	9	3	5	3	6	1	6	3	6	5	10	8	8	57	8	58	58	58	58	58	58				
Vanderburgh.....	74	77	43	56	44	30	67	34	49	56	43	45	7	541	77	577	590	590	590	590	590				
Vermillion.....	12	8	18	9	10	4	6	8	4	6	5	36	45	96	31	96	97	97	97	97	97				
Vigo.....	85	38	30	65	30	29	68	34	36	31	34	36	5	515	1	506	520	520	520	520	520				
Wabash.....	6	9	2	12	16	14	4	6	7	31	18	14	14	164	1	163	165	165	165	165	165				
Warren.....														76		72	72	72	72	72	72				
Warrick.....	15	13		58	11	9	27	18	13	20	9	14	14	203	4	192	182	182	182	182	182				
Washington.....	14	15	25				16	10	10					90		54	54	54	54	54	54				
Wayne.....	28	24	41	29	27	14	24	18	26	20	37	17	17	292	13	295	300	300	300	300	300				
Wells.....	24	17	21	15	7	30	22	8	20	12	9	18	13	203	1	144	141	141	141	141	141				
White.....	26	12	14	20	16	20	21	4	7	12	4	13	13	168	1	105	105	105	105	105	105				
Whitley.....	12	13	10	18	6	10	16	7	16	15	8	19	19	150		145	148	148	148	148	148				
Total.....	1,945	1,840	1,803	1,852	1,562	1,571	1,903	1,425	1,474	1,634	1,557	1,793	19,966	453	17,363	17,500	1,020	755	2,036	2,164	20,419				

TABLE D.

Marriages, Grouped Ages, for the Year Ending September 30, 1897.

COUNTIES.	GROUPED AGES.																Total.		
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		Over 80.			Not Reported.	
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.		Grooms.	Brides.
Adams	7	59	134	109	31	14	9	6	7	3	5	3	2	3	1	4	1	194	
Allen	3	87	376	365	131	62	32	23	11	4	6	6	2	2	4	22	565		
Bartholomew	5	46	142	131	40	20	11	6	7	3	2	3	1	1	2	3	212		
Benton	7	22	71	66	11	8	2	2	7	1	1	1	1	1	2	98	159		
Blackford	2	61	122	81	27	11	3	4	4	1	1	1	1	1	1	1	201		
Boone	4	61	144	107	28	21	12	3	6	4	4	1	2	4	1	1	107		
Brown	3	40	101	83	30	8	5	3	4	3	4	1	1	1	1	1	147		
Carroll	3	58	169	160	56	26	23	16	9	1	3	1	1	1	1	262	262		
Cass	3	58	169	160	56	26	23	16	9	1	3	1	1	1	1	807	807		
Clark	3	58	169	160	56	26	23	16	9	1	3	1	1	1	1	807	807		
Clay	5	85	173	128	39	15	10	8	5	3	2	2	1	1	1	2	242		
Clinton	5	67	173	141	42	27	11	4	7	3	4	2	1	1	1	1	244		
Crawford	3	40	79	40	7	13	1	4	5	2	4	1	1	1	1	1	100		
Davies	6	52	155	123	28	24	8	5	6	3	3	1	1	1	1	1	206		
Dearborn	1	27	100	98	37	16	12	8	3	1	1	1	1	1	43	47	198		
Decatur	4	63	134	106	37	16	12	8	6	3	2	2	2	1	2	1	197		
Dekalb	3	62	155	130	41	16	9	8	3	3	3	1	1	1	1	1	221		
Delaware	8	102	228	173	55	32	17	9	12	5	1	1	1	1	1	1	244		
Dubois	3	37	114	94	29	17	8	3	3	4	3	2	2	1	1	4	158		
Elkhart	3	45	140	126	37	18	12	10	5	4	5	1	1	1	1	1	203		
Fayette	2	30	68	65	26	6	8	7	5	1	2	1	1	1	1	1	109		
Floyd	2	12	68	76	19	10	11	6	5	1	2	2	2	1	27	29	134		
Fountain	14	50	125	121	32	17	9	14	9	5	2	1	3	1	1	1	225		
Franklin	1	23	70	63	27	19	9	6	3	4	2	1	1	1	1	1	112		
Fulton	2	59	116	86	30	13	15	5	3	4	1	1	1	1	2	3	171		

TABLE D—Continued.

COUNTIES.	GROUPED AGES.																Total.		
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		Over 80.			Not Reported.	
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.		Grooms.	Brides.
Gibson.....	8	82	142	96	34	18	15	6	6	3	3	1	1	1	1	1	8	2	
Grant.....	13	169	342	243	64	30	29	16	14	5	3	1	1	1	1	1	52	11	
Greene.....	4	24	24	9	3	5	2	2	2	1	1	1	1	1	1	1	52	8	
Hamilton.....	4	80	208	150	36	29	17	12	9	3	3	2	2	1	1	1	17	52	
Hancock.....	4	44	110	94	30	17	10	5	6	2	2	3	3	1	1	1	17	1	
Harrison.....	1	45	133	118	32	15	10	8	12	8	6	1	1	1	1	1	1	18	
Hendricks.....	4	38	126	115	28	14	8	4	2	1	5	2	2	1	1	1	1	1	
Henry.....	7	51	145	111	32	33	11	7	8	2	2	1	1	1	1	1	1	1	
Howard.....	9	71	195	155	39	28	15	12	9	7	6	2	2	2	2	2	1	1	
Huntington.....	4	50	160	140	34	17	13	8	4	4	6	2	2	2	2	2	1	1	
Jackson.....	5	45	133	131	40	19	17	7	5	2	2	1	1	2	2	2	23	22	
Jasper.....	4	33	83	61	9	6	7	1	1	2	1	2	1	1	1	1	3	3	
Jay.....	9	100	218	153	39	28	15	9	9	5	5	2	2	2	2	2	312	312	
Jefferson.....	1	45	74	56	27	10	6	3	5	1	1	1	1	1	1	1	1	1	
Jennings.....	3	40	104	73	18	13	10	11	5	4	2	1	1	1	1	1	7	8	
Johnson.....	14	117	190	132	55	20	14	9	5	2	2	1	1	1	1	1	10	10	
Knox.....	5	73	207	167	42	29	15	13	7	6	6	2	2	2	2	2	10	10	
Kosciusko.....	9	32	78	61	23	9	4	5	3	4	2	2	2	1	1	1	10	10	
Lafayette.....	1	151	228	148	65	29	25	9	10	3	2	1	1	1	1	1	2	2	
Lake.....	1	64	187	161	53	27	16	10	7	5	5	2	2	1	1	1	1	2	
Laporte.....	6	62	126	98	32	19	15	9	10	3	3	1	1	1	1	1	1	2	
Lawrence.....	14	169	400	318	90	39	26	22	15	5	8	4	4	4	4	4	114	114	
Madison.....	18	222	712	691	278	158	80	49	38	17	14	3	3	1	1	1	3	6	
Marion.....	6	74	172	121	33	16	8	10	6	5	5	1	1	1	1	1	2	5	
Marshall.....	4	25	64	56	20	12	6	3	5	3	1	1	1	1	1	1	1	5	
Martin.....	3	45	129	100	45	20	11	8	5	3	1	1	1	1	1	1	5	5	
Miami.....	3	45	129	100	45	20	11	8	5	3	1	1	1	1	1	1	5	5	
Monroe.....	8	50	119	93	33	23	8	10	8	4	4	3	3	2	2	2	2	2	

Montgomery	5	51	168	187	57	32	22	12	8	5	8	1						3	3	271
Morgan	10	48	180	18	18	15	12	6	5	10	8	8	1					7	4	149
Newton	1	3	46	43	16	15	13	8	13	5	1	2	2	1				15	15	172
Noble	4	43	113	95	28	12	11	5	3	1	2	1	1	2				1	3	154
Ohio	7	7	124	25	3	16	4	2	5	2	2	2	1	2						201
Orange		41	109	86	24	16														
Owen	2	28	84	64	17	13	6	2	3	6	3	3			1			86	87	
Parke																				
Perry	5	59	116	84	28	15	13	6	4	2	1	1	1	1				3	4	171
Pike	8	51	120	102	23	6	10	1	5	2	1							1	1	162
Porter	2	29	62	44	19	19	11	7	5	2	1									163
Possey	7	70	154	134	56	22	15	7	6										5	238
Pulaski		26	64	53	18	6	5	4	2	2	2	1	1	1						92
Putnam	6	61	160	124	29	17	11	10	3	2	4	1	2	1						215
Randolph	8	88	185	156	44	21	11	6	7	6	4	2	1	2	1			1	1	262
Ripley																		159	159	189
Rush	3	40	91	75	24	14	12	4	5	3	3	3						20	1	138
Scott	1	26	40	39	8	4	2	2	1	1	1	1								73
Shelby	4	45	106	89	27	13	10	7	7	5	1			4	1			1	16	160
Spencer	5	80	144	90	42	18	12	3	3	2	2	1	1	1	1					210
Starke	1	19	51	46	10	1	4	2	3	3	3	1	1	1						71
Steuben	5	36	104	97	26	12	10	2	3	3	3	1	1	1	1			1	3	151
St. Joseph	2	88	254	232	76	42	30	15	15	6	10	3	1	1				2	4	380
Sullivan	8	87	176	442	54	22	22	9	2	3	3	3								287
Switzerland	2	40	97	82	29	20	14	7	6	1	2	1								150
Tippecanoe	11	58	185	162	55	30	27	15	5	7	7	1	1	1				3	2	275
Tipton	17	84	167	94	20	17	13	6	2	1	1	2		1	1			4	22	225
Union	2	13	39	36	8	6	4	2	3	2	2							7	7	65
Vanderburgh	8	94	420	429	132	65	34	18	15	7	6	2						1	3	618
Vermillion	2	30	74	56	16	63	3	5	2											97
Vigo	8	128	374	333	109	68	32	12	16	6	4	3	3	2	1				1	546
Wabash	4	43	120	98	28	17	7	3	3	2	1	2	2	2	1			2		165
Warren	3	23	51	42	8	2	8	7	5	2	2	1	1	1						76
Warrick	5	51	134	131	38	18	23	5	5			1	1	1				1	1	207
Washington	2	23	60	54	18	5	1	1	1		2	2	1	1				5	5	90
Wayne	6	64	207	191	58	27	14	12	11	6	5	2	2	4	1					365
Wells	2	61	153	117	23	12	12	7	5	1	2	2	1	3				3	4	203
White	7	57	121	91	25	11	9	5	2	3	5	2	2							169
Whitley	1	38	112	90	22	11	7	4	1	3	3	1	1	3	2			1	1	150
Total	485	5,029	12,727	10,611	3,319	1,772	1,117	656	535	279	263	88	82	20	11	1	1,900	1,983		20,419

Return by Counties of Cases and Deaths of Contagious and Infectious Diseases for the Year Ending September 30, 1897.

COUNTIES.	DIPHTHERIA AND MEM- BRANOUS CROUP.		SCARLET FEVER.		TYPHOID FEVER.		MEASLES.	
	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.
Adams.....	15	72		1	6	16		1
Allen.....	30		1		22			
Bartholomew.....	33	266		22	15	12	1	4
Benton.....	3	5		1	1		1	
Blackford.....	14	23		2	2			
Boone.....	12	40		11	6	4	1	47
Brown.....	9	23		1	3	22		
Carroll.....	6	19		1	1	2	2	59
Cass.....	9	5			27			
Clark.....	3	1			3			
Clay.....	9	16	1	13	4	9	5	169
Clinton.....	8	5		6	4	8		6
Crawford.....					4		1	
Daviess.....	10	51	1	15	8	6		22
Dearborn.....	2	6			3	3		4
Decatur.....	5	23		7	15	5		1
Dekalb.....	11	33		13	12	13		2
Delaware.....	17	145		80	23	34	2	139
Dubois.....	8	132		52	9	33		64
Elkhart.....	8	44		37	4	1		72
Fayette.....	4	8		21	5	11		16
Floyd.....	5	4		6	5	20		950
Fountain.....	10	18	1	23	9	43		157
Franklin.....	5	14		13	7	27		246
Fulton.....	16	27		20	2	2		1
Gibson.....	13	33		33	15	40	5	250
Grant.....	3	26		26	5	27		
Greene.....	5	20		3	7	10	3	17
Hamilton.....	8	15		5	8	31	1	155
Hancock.....	10	16		11	9	28		64
Harrison.....	11	14		1	6	5		
Hendricks.....	9	16		5	3	7	3	25
Henry.....	8	20	1	25	6	17		7
Howard.....	8	24		13	4	1	5	4
Huntington.....	25				14			
Jackson.....	4	13		2	13	6	1	1
Jasper.....	2	4		10				
Jay.....	27	166		21	4	1		7
Jefferson.....	6	6		4		2		
Jennings.....	9	19				1		3
Johnson.....	10	56	1	16	4	25		20
Knox.....	15	48		4	3	3		1
Kosciusko.....	4	27		25	4	16		3
Lagarange.....		1	1	29	3	10	4	47
Lake.....	67	142	4	76	29	10	4	45

Return by Counties of Cases and Deaths by Contagious and Infectious Diseases—Continued.

COUNTIES.	DIPHTHERIA AND MEM- BRANOUS CROUP.		SCARLET FEVER.		TYPHOID FEVER.		MEASLES.	
	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.
Laporte.....	19	78	4	69	4	1	.....	17
Lawrence.....	11	33	.....	4	10	.....	.....	5
Madison.....	30	132	1	17	18	10	.....	52
Marion.....	27	.....	11	.....	52	.....	6	.....
Marshall.....	6	16	.....	7	2	8	1	10
Martin.....	1	9	.....	.....	2	9	.....	.....
Miami.....	1	1	1	9	9	.....	3	133
Monroe.....	7	2	4	11	10	.....	2	131
Montgomery.....	4	22	2	41	.....	17	.....	110
Morgan.....	.....	10	.....	11	4	15	1	.....
Newton.....	1	.....	.....	.....	5	.....	3	.....
Noble.....	1	20	1	12	3	29	1	6
Ohio.....	2	10	.....	.....	.....	1	.....	.....
Orange.....	4	16	.....	.....	4	.....	1	.....
Owen.....	17	105	.....	26	10	65	.....	100
Parke.....	5	19	.....	1	.....	.....	.....	.....
Perry.....	5	2	.....	.....	3	10	.....	260
Pike.....	8	28	.....	5	.....	.....	.....	.....
Porter.....	9	42	.....	4	4	10	.....	26
Posey.....	10	24	3	15	6	14	5	137
Pulaski.....	3	28	.....	1	3	1	.....	.....
Putnam.....	3	33	2	27	5	54	1	10
Randolph.....	9	63	.....	20	9	29	.....	15
Ripley.....	8	29	.....	7	.....	.....	1	6
Rush.....	3	9	1	24	.....	.....	3	.....
Scott.....	.....	9	.....	.....	5	.....	.....	.....
Shelby.....	10	62	.....	24	6	13	.....	8
Spencer.....	9	7	1	10	8	31	.....	48
Starke.....	4	4	.....	.....	.....	1	2	39
Steuben.....	2	5	.....	3	.....	1	.....	5
St. Joseph.....	65	102	2	57	9	7	.....	3
Sullivan.....	7	4	3	7	7	1	7	75
Switzerland.....	4	3	.....	.....	2	2	1	62
Tippecanoe.....	23	31	2	16	6	.....	.....	76
Tipton.....	2	4	2	23	6	4	.....	175
Union.....	.....	1	.....	1	1	.....	.....	.....
Vanderburgh.....	7	138	1	50	22	148	3	757
Vermillion.....	1	9	.....	9	2	1	.....	14
Vigo.....	18	65	.....	24	18	5	2	336
Wabash.....	2	.....	.....	.....	3	.....	.....	.....
Warren.....	1	.....	.....	.....	1	.....	.....	.....
Warrick.....	3	7	.....	14	6	5	3	.....
Washington.....	4	8	.....	1	10	14	.....	14
Wayne.....	6	38	2	40	12	66	.....	.....
Wells.....	29	111	.....	3	15	19	.....	5
White.....	6	19	1	10	5	.....	2	60
Whitley.....	7	19	.....	1	4	4	.....	.....
Total.....	907	3,028	55	1,154	655	1,096	92	5,304

WATER ANALYSES

AND

DIPHThERIA CULTURES.

The following Tables record the Sanitary Water Analyses made in the line of prevention of water-borne diseases, and the Diphtheria Cultures made in the line of prevention of Diphtheria.

DIPHTHERIA CULTURES.

No.	DATE.	NAME OF PATIENT.	NAME OF PHYSICIAN.	ADDRESS OF PHYSICIAN.	RESULT OF EXAMINATION.
1	Oct. 2	Addie King	Dr. Forrest	Marion,	Positive.
2	" 5	Maggie Ault	J. B. Hudson	Columbus,	Positive.
3	" 8	Stella M. Davis	W. G. Powers	Albany,	Positive.
4	" 8	W. E. Wisner, M. D.	Dr. McCoy	Columbus,	Positive.
5	" 9	Louie Thompson	John C. Ross	Nashville,	Positive.
6	" 10	Baby Petro	Jos. G. Griffitt	Story, Brown Co.,	Positive.
7	" 10	Edie Shipley	Jos. G. Griffitt	Story, Brown Co.,	Positive.
8	" 13	Marked No. 1	C. E. Elder	Montpelier,	Positive.
9	" 13	Marked No. 2	C. E. Elder	Montpelier,	Positive.
10	" 14	John Williamson	J. B. Hudson	Columbus,	Positive.
11	" 14	Donna Robinson	W. M. Demotte	Atwell,	Positive.
12	" 15	Alf. King	J. H. Forrest	Marion,	Positive.
13	" 18	Bayne	M. Goss	Rockville,	Positive.
14	" 19	Dollie Ashcraft	J. E. Talbott	Linton,	Positive.
15	" 22	Nellie Tilley	D. Preston	Haughville,	Positive.
16	" 25	Lizzie Beigs	Dr. Hudson	Columbus,	Positive.
17	" 26	Miss Stuart	J. T. McCoy	Columbus,	Positive.
18	" 27	Mary Mabley	Dr. Holden	Columbus,	Positive.
19	Nov. 1	L. N. Lawson	Dr. Evans	Meca,	Positive.
20	" 5	Mrs. E. L. Wood	E. B. Lewis	Indianapolis,	Positive.
21	" 7	Otto Ernst	E. B. Shney	Medora,	Positive.
22	" 7	Phil Walters	Dr. Ramsey	Mt. Vernon,	Streptococci and staphylococci.
23	" 7	Leone Reidy	F. R. Stiers	Redkey,	Positive.
24	" 12	Zeburnia Neighbors	J. B. Wilson	Ladoga,	Positive.
25	" 12	Hattie Craven	E. O. Price	Ladoga,	Positive.
26	" 12	Eva Connor	H. M. Aspy	Glenview,	Positive.
27	" 12	Geo. Kinney	Dr. Hudson	Columbus,	Positive.
28	" 14	Lawrence Kohn	Marie Goss and W. H. Gillum	Rockville,	No growth.
29	" 14	Ray Godfrey	Dr. McCoy	Columbus,	Positive.
30	" 14	Geo. Kinney	Dr. McCoy	Columbus,	Positive.
31	" 16	Mrs. F.	Dr. Baker	Fortville,	Positive.
32	" 16	Virginia McCarty	W. H. McCord	Fortville,	Positive.
33	" 18	Migra Oaley	W. H. Hixon	Farmer,	Positive.
34	" 20	Geo. Wilson	D. C. Ramey	Mt. Vernon,	Streptococci and staphylococci.
35	" 21	Anna Vally	Dr. McCoy	Columbus,	No growth.
36	" 22	Albert J. Nelson	A. Rice	Columbus,	Positive.
37	" 26	Ira Butt	J. C. Frey	Deedsville,	No growth.

DIPHTHERIA CULTURES—Continued.

No.	DATE.	NAME OF PATIENT.	NAME OF PHYSICIAN.	ADDRESS OF PHYSICIAN.	RESULT OF EXAMINATION.
38	Dec. 1	Zona Scott	H. O. Ritter	Orangeville, Ind.	Positive.
39	"	Luna Dyar	B. Vocum	Arney	Positive.
40	"	Ira Burt	J. C. Frey	Deedsville, Columbus	Staphylococci.
41	"	Harry Litterell	Dr. McLeod	"	Staphylococci.
42	"	Mary Gault	J. C. Frey	Deedsville, Columbus	Positive.
43	"	Maud Staver	G. E. Fulton	Buffton	Staphylococci.
44	"	Charles Nicholson	P. R. Stiers	Redkey	Serum rotten.
45	"	Samuel Bailey	L. T. Cox	Napoleon	Streptococci and diplococci.
46	"	Myron Ashcraft	P. R. Stiers	Redkey	Streptococci and diplococci.
47	"	Karl Stafford	O. M. Keys	Dana	Positive.
48	"	B. Vocum	B. D. Baily	Spiceand, Arney	Positive.
49	"	George Seiga	B. R. Bacon	Arney	Positive.
50	"	Gray Vandewenter	N. D. Cox	Lowell	Serum spoiled.
51	"	Rosa Frank	J. S. Hunkle	Spencer	Staphylococci and diplococci.
52	"	Lillian Hiatt	J. D. Baily	Spiceand, Arney	Staphylococci and diplococci.
53	"	Russell Thomas	Dr. Dick	Portland	Positive.
54	"	Jessie Hiatt	J. T. Dick	Portland	Streptococci and staphylococci.
55	"	Arthur Thomas	J. T. Dick	Portland	Streptococci and staphylococci.
56	"	Marie LaVente	O. A. Mitchell	Ligonier	Streptococci and staphylococci.
57	"	Elmer Zschell	O. A. Mitchell	Marmont	Positive.
58	"	F. Stollery	B. W. S. Wiseman	Marmont	Positive.
59	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
60	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
61	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
62	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
63	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
64	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
65	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
66	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
67	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
68	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
69	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
70	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
71	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
72	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
73	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
74	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
75	"	John Groves	B. W. S. Wiseman	Marmont	Positive.
76	"	John Groves	B. W. S. Wiseman	Marmont	Positive.

77	"	12	Robert Wrayne	W. H. Sternum	North Vernon,	"	Positive.
78	"	12	Walter Cole	R. E. Holder	Columbus,	"	Positive.
79	"	17	Myrtle Freeman	Clark Cook	Fowler,	"	Positive.
80	"	19	N. W. Emery	H. R. Jones	Bloomfield,	"	Positive.
81	Sept.	1	Master Jones	Dr. Hudson	Columbus,	"	Streptococci and staphylococci.
82	"	3	Millie Thompson	Dr. McCoy	Columbus,	"	Streptococci and staphylococci.
83	"	8	J. W. Smith	R. T. Olmstead	Versailles,	"	Positive.
84	"	10	Mary Benham	John G. Jones	Columbus,	"	No growth.
85	"	10	Paul Joehaglin	Dr. Hudson	Versailles,	"	Streptococci and staphylococci.
86	"	11	Walter Hayden	Dr. Holden	Columbus,	"	Positive.
87	"	12	Roscoe Pittman	A. M. Kirkpatrick	Indianapolis,	"	Positive.
88	Sept.	13	Leyle Knight	S. F. Kincaid	Columbus,	Ind.	Positive.
89	"	16	Addie Harris	A. G. Osterman	Taylorville,	"	Positive.
90	"	17	Clara Brathauer	W. J. French	Dudlevtown,	"	No growth.
91	"	17	Mrs. H. Wetherald	Dr. Hudson	Frankton,	"	Positive.
92	"	21	Kersey	Dr. McCoy	Columbus,	"	Positive.
93	"	21	Paul Throp	E. D. Freeman	Osgood,	"	Positive.
94	Oct.	23	Harold Freeman	J. P. Shepherd	Melott,	"	Staphylococci.
95	"	7	Anna Knight	R. W. Claypool	Gas City,	"	Positive.
96	"	7	Eva E. N. Kirk	L. H. Conley	Taylorville,	"	Streptococci and staphylococci.
97	"	7	Ollie Rich	S. F. Kincaid	Melott,	"	Streptococci and staphylococci.
98	"	7	Emery Rupp	R. T. Olmstead	Gas City,	"	Positive.
99	"	9	Hand Coltagon	J. N. Bates	Taylorville,	"	Positive.
100	"	12	R. T. Olmstead	R. T. Olmstead	Frankton,	"	Cocci.
101	"	13	Eugene Taylor	Y. R. Stiers	Versailles,	"	Positive.
102	"	14	Oda White	W. H. White	Redkey,	"	Positive.
103	"	21	Clarence	T. B. Aydelotte	Edinburg,	"	Positive.
104	"	25	Mayme Shultz	T. B. Aydelotte	Newtown,	"	Positive.
105	"	25	Ethel Chryin	R. M. Howe	Edinburg,	"	Positive.
106	"	26	Otto Busching	R. T. Olmstead	Versailles,	"	Staphylococci.
107	"	26	Russ S. Jkuna	S. H. Davis	Marion,	"	Positive.
108	"	29	John Bradburn	Drs. Goss and Gillum	Rockville,	"	Staphylococci.
109	"	30	Lee Malcolm	Jas. L. Hanna	Paris Crossing,	"	Positive.
110	"	31				"	

SANITARY WATER ANALYSIS.

Number.	County.	City or Town.	Name of Collector.	Date of Collection.	Date of Analysis.	Well, River, Spring, Creek, Pond.	No. of Sanitary Surveys.	APPEARANCE.			Color.
								Turbidity.	Sediment.		
1	Marion...	Broad Ripple	J. W. Bates.	.....	1897.	Well	.....	None	Some	.....	Clear.
2	Marion...	Broad Ripple	J. W. Bates.	.....	Apr. 12	Well	.....	None	Flocks	.....	Clear.
3	Marion...	Broad Ripple	J. W. Bates.	.....	Apr. 12	Well	.....	None	Flocks	.....	Clear.
4	Marion...	Broad Ripple	J. W. Bates.	.....	Apr. 17	Well	.....	None	None	.....	Clear.
5	Benton.	Fowler	Clark Cook	.....	Apr. 23	Well	.....	None	None	.....	Faint yellow.
6	Benton.	Fowler	Clark Cook	.....	Apr. 29	Stand pipe	.....	None	None	.....	Faint yellow.
7	Montgomery	New Market.	C. H. Waiden	.....	Apr. 30	None	.....	None	None	.....	Clear, bright.
8	Wabash	Young America.	J. I. Gray	.....	May 3	None	.....	None	None	.....	Faint yellow.
9	Johnson.	Franklin	J. C. Wood	.....	May 17	None	.....	None	None	.....	Clear.
10	Henry	New Castle	W. E. Jeffrey	.....	May 23	Well	.....	None	Specky	.....	Clear.
11	Henry	Kenard.	R. A. Smith	.....	June 10	Well	.....	None	Flocky	.....	Clear.
12	Boone	Lebanon	Wm. I. Schultz	.....	June 14	City well	.....	None	None	.....	Cloudy.
13	Greene	Linton	H. H. Little	.....	June 15	Well	.....	None	None	.....	Clear.
14	Kosciusko.	Warsaw	J. A. Chandler	.....	June 17	Lake	.....	None	Specks	.....	Clear.
15	Kosciusko.	Warsaw	J. A. Chandler	.....	June 17	Hydrant.	.....	None	None	.....	Clear.
16	Boone	Lebanon	J. R. Ball	.....	June 20	Well	.....	None	None	.....	Clear.
17	Marion.	Broad Ripple	J. W. Bates.	.....	June 21	Well	.....	None	Flocky	.....	Not clear.
18	Montgomery	Darlington.	J. S. Coffin	.....	June 23	Reservoir	.....	None	Flocky	.....	Yellow.
19	Grant	Marion.	J. B. Lyter	.....	June 23	Well	.....	None	Some	.....	Clear.
20	Laporte	Laporte	Dr. Darling	.....	June 24	None	.....	None	Flocky	.....	Yellow.
21	Fountain.	Covington.	W. R. Stout.	.....	June 30	None	.....	None	None	.....	Clear.
22	Marion.	Broad Ripple	J. W. Bates.	.....	June 25	Well	.....	None	Abundant	.....	Yellow.
23	Marion.	Broad Ripple	J. W. Bates.	.....	June 30	Well	.....	None	None	.....	Yellow.
24	Marion.	Broad Ripple	J. W. Bates.	.....	July 2	Well	.....	None	None	.....	Clear.
25	Washington.	Salem	H. M. Paynter.	.....	July 6	None	.....	None	None	.....	Clear.
26	Washington.	Salem	H. M. Paynter.	.....	July 6	Water wks. tap.	.....	None	Some	.....	Clear.
27	Fountain.	Covington.	W. R. Stout.	.....	July 7	Well	.....	None	None	.....	Clear.
28	Marion.	Broad Ripple	J. W. Bates.	.....	July 9	Well	.....	None	None	.....	Clear.
29	Marion.	Broad Ripple	J. W. Bates.	.....	July 9	Driven well	.....	None	None	.....	Clear.
30	Marion.	Broad Ripple	J. W. Bates.	.....	July 10	Dug well	.....	None	None	.....	Yellow.

SANITARY WATER ANALYSIS—Continued.

Number.	Odor.	Solids.			Color After Ignition.	Chlorine.	Nitrogen as				Oxygen Absorbed	Growth in Carbol-bullion.	Remarks.
		Total.	Loss on Ignition.	Fixed.			Free Ammonia.	Albuminoid Ammonia.	Nitrates.	Nitrites.			
1	Faint.	56.00	12.00	44.00		3.4	.015	.018	.008	1.6	...	Growth	
2	Faint.	37.00	13.00	24.01		3.7	.017	.020	.010	.8	...	Growth	
3	Faint.	34.00	11.00	23.00		4.0	.012	.007	.107	1.07	...	Growth	
4	None.	36.00	10.00	36.00		1.1	.0	Trace.	Trace.	Pres.	...	Growth	
5	None.	40.80	2.40	38.40		.9	.007	.001	0	0	...	No growth	
6	None.	33.00	1.50	31.50		1.3	.008	.001	Trace.	0	...	No growth	
7	Faint.	81.00	12.40	68.60		140.0	.005	.012	Pres.	Pres.	...	Growth	
8	Faint.	37.80	14.60	22.20		2.8	.068	.006	0	0	...	Growth	
9	None.	53.40	2.08	51.32		.9	.056	.004	0	0	...	Growth	
10	Cafy.	64.80	40.20	24.60		3.5	.010	.025	Pres.	Bad.	...	Growth	
11	Faint.	112.20	39.20	73.00		18.5	.002	.003	.001	Bad.	...	No growth	
12	None.	40.80	8.40	32.40		1.5	.028	.002	0	0	...	No growth	
13	...	68.60	7.00	61.60		2.6	.024	.002	0	0	...	No growth	
14	Musty	37.40	14.60	22.80		1.2	.020	.062	Trace.	0	...	Growth	
15	None.	37.60	15.30	22.30		.8	.006	.012	0	Pres.	...	Growth	
16	None.	70.20	24.80	45.40		4.6	.002	.006	.001	Bad.	...	No growth	
17	Bad.	34.60	7.40	27.20		1.4	.010	.009	.4	.45	...	Growth	
18	Creeky	55.40	18.60	34.80		1.6	.001	.008	0	.4	...	No growth	
19	None.	100.6	31.80	68.80		9.7	Trace.	.004	0	0	...	Growth	
20	Bad.	34.20	4.00	30.20		.8	.058	.031	0	0	...	Growth	
21	None.	55.00	20.40	34.60		2.7	0	0	0	.8	...	No growth	
22	Faint.	29.00	3.0	26.00		.9	.017	.005	0	Pres.	...	Growth	
23	Faint.	62.00	14.40	47.60		4.0	.016	.026	2.0	3.2	...	Growth	
24	None.	62.40	14.60	47.80		2.5	Trace.	.1	.8	.8	...	No growth	
25	Creeky	4.40	0	4.40		1.7	.008	.006	Pres.	.4	...	No growth	
26	Creeky	27.80	5.20	22.60		1.5	Trace.	.004	0	.45	...	No growth	
27	None.	234.0	80.0	154.0		76.0	0	.010	.002	8.0	...	No growth	
28	None.	95.60	26.20	69.40		11.3	0	.006	Trace.	0	...	No growth	
29	Fishy.	45.00	11.20	23.80		1.5	0	.005	Trace.	.04	...	No growth	
30	None.	47.60	14.00	33.60		2.9	Trace.	.028	0	4.0	...	No growth	

SANITARY WATER ANALYSIS.

Number.	County.	City or Town.	Name of Collector.	Date of Collection.	Date of Analysis.	Well, River, Spring, Creek, Pond.	No. of Sanitary Survey.	APPEARANCE.		
								Turbidity.	Sediment.	Color.
1	Marion.....	Broad Ripple.....	J. W. Bates.....	1897	Apr. 12.....	Well.....		None.....	Some.....	Clear.
2	Marion.....	Broad Ripple.....	J. W. Bates.....		Apr. 12.....	Well.....		None.....	Flocks.....	Clear.
3	Marion.....	Broad Ripple.....	J. W. Bates.....		Apr. 12.....	Well.....		None.....	Flocks.....	Clear.
4	Benton.....	Broad Ripple.....	J. W. Bates.....		Apr. 17.....	Well.....		None.....	None.....	Clear.
5	Benton.....	Fowler.....	Clark Cook.....		Apr. 29.....	Well.....		None.....	None.....	Faint yellow.
6	Benton.....	Fowler.....	Clark Cook.....		Apr. 29.....	Stand pipe.....		None.....	None.....	Faint yellow.
7	Montgomery.....	New Market.....	C. H. Walden.....		Apr. 30.....	None.....		None.....	None.....	Clear, bright.
8	Wabash.....	Young America.....	A. J. Gray.....		May 3.....	None.....		None.....	Some.....	Faint yellow.
9	Johnson.....	Franklin.....	J. C. Wood.....		May 17.....	None.....		None.....	None.....	Clear.
10	Henry.....	New Castle.....	W. E. Jeffrey.....		May 29.....	Well.....		None.....	Specky.....	Clear.
11	Henry.....	Kenard.....	R. A. Smith.....		June 10.....	Well.....		None.....	Floppy.....	Clear.
12	Boone.....	Lebanon.....	Wm. H. Schultz.....		June 14.....	City well.....		None.....	None.....	Cloudy.
13	Greene.....	Linton.....	H. H. Little.....		June 15.....	Well.....		None.....	None.....	Clear.
14	Kosciusko.....	Warsaw.....	J. A. Chandler.....		June 17.....	Lake.....		None.....	Specks.....	Clear.
15	Kosciusko.....	Warsaw.....	J. A. Chandler.....		June 17.....	Hydrant.....		None.....	None.....	Clear.
16	Boone.....	Lebanon.....	J. R. Ball.....		June 20.....	Well.....		None.....	None.....	Clear.
17	Marion.....	Broad Ripple.....	J. W. Bates.....		June 21.....	Well.....		None.....	Floppy.....	Not clear.
18	Montgomery.....	Darlington.....	J. S. Coffin.....		June 23.....	Reservoir.....		None.....	Floppy.....	Yellow.
19	Grant.....	Marion.....	J. B. Lyster.....		June 23.....	Well.....		None.....	Some.....	Clear.
20	Laporte.....	Laporte.....	Dr. Darling.....		June 24.....	None.....		None.....	Floppy.....	Yellow.
21	Fountain.....	Covington.....	W. R. Stout.....		June 30.....	None.....		None.....	None.....	Clear.
22	Marion.....	Broad Ripple.....	J. W. Bates.....		June 26.....	Well.....		None.....	Abundant.....	Yellow.
23	Marion.....	Broad Ripple.....	J. W. Bates.....		June 30.....	Well.....		None.....	None.....	Yellow.
24	Marion.....	Broad Ripple.....	J. W. Bates.....		July 2.....	Well.....		None.....	None.....	Clear.
25	Washington.....	Salem.....	H. M. Paynter.....		July 6.....	None.....		None.....	None.....	Clear.
26	Washington.....	Salem.....	H. M. Paynter.....		July 6.....	Water wks. tap.....		None.....	Some.....	Clear.
27	Fountain.....	Covington.....	W. R. Stout.....		July 7.....	Well.....		None.....	None.....	Clear.
28	Marion.....	Broad Ripple.....	J. W. Bates.....		July 9.....	Well.....		None.....	None.....	Clear.
29	Marion.....	Broad Ripple.....	J. W. Bates.....		July 9.....	Driven well.....		None.....	None.....	Clear.
30	Marion.....	Broad Ripple.....	J. W. Bates.....		July 10.....	Dug well.....		None.....	None.....	Yellow.

SANITARY WATER ANALYSIS—Continued.

Number.	Odor.	SOLIDS.			Color After Ignition.	Chlorine.	NITROGEN AS				Oxygen Absorbed	Growth in Carbol-bullion.	Remarks.
		Total.	Loss on Ignition.	Fixed.			Free Ammonia.	Albuminoid Ammonia.	Nitrites.	Nitrates.			
1	Faint.	56.00	12.00	44.00	.....	3.4	.015	.018	.008	1.6	.....	Growth	.....
2	Faint.	37.00	13.00	24.01	.....	3.7	.017	.020	.010	.8	.....	Growth	.....
3	Faint.	34.00	11.00	23.00	.....	4.0	.012	.020	.007	1.07	.....	Growth	.....
4	None.	36.00	10.00	36.00	.....	1.1	.0	.012	Trace.	Pres.	.....	Growth	.....
5	None.	40.80	2.40	38.40	.....	1.9	.007	.001	Trace.	0	.....	No growth	.....
6	None.	33.00	1.50	31.50	.....	1.3	.008	.001	Trace.	0	.....	No growth	.....
7	Faint.	81.00	12.40	68.60	.....	140.0	.005	.012	Pres.	Pres.	.....	Growth	.....
8	Faint.	37.80	14.60	23.20	.....	2.8	.058	.006	0	0	.....	Growth	.....
9	None.	53.40	2.08	51.32	.....	9	.056	.004	0	Bad.	.....	Growth	.....
10	Cafty.	64.80	40.20	24.60	.....	3.5	.010	.025	Pres.	0	.....	Growth	.....
11	Faint.	112.20	39.20	73.00	.....	18.5	.002	.003	.001	Bad.	.....	No growth	.....
12	None.	40.80	8.40	32.40	.....	1.5	.028	.002	0	0	.....	No growth	.....
13	None.	68.60	7.00	61.60	.....	2.6	.024	.002	0	0	.....	No growth	.....
14	Musty.	37.40	14.60	22.80	.....	1.2	.020	.032	Trace.	0	.....	Growth	.....
15	None.	37.60	15.30	22.30	.....	.8	.006	.012	0	Pres.	.....	Growth	.....
16	None.	70.20	24.80	45.40	.....	4.6	.002	.006	.001	Bad.	.....	No growth	.....
17	Bad.	34.60	7.40	27.20	.....	1.4	.010	.009	4	.45	.....	Growth	.....
18	Creeky.	55.40	18.60	36.80	.....	1.6	.001	.008	0	0	.....	No growth	.....
19	None.	100.6	31.80	68.80	.....	9.7	Trace.	.004	0	0	.....	Growth	.....
20	Bad.	34.20	4.00	30.20	.....	.8	.068	.031	0	0	.....	Growth	.....
21	None.	55.00	20.40	34.60	.....	2.7	0	0	0	.8	.....	No growth	.....
22	Faint.	29.80	3.0	26.80	.....	9	.017	.005	0	Pres.	.....	Growth	.....
23	Faint.	62.00	14.40	47.60	.....	4.0	.016	.026	2.0	3.2	.....	Growth	.....
24	None.	62.40	14.60	47.80	.....	2.5	Trace.	Trace.	.1	.5	.....	Growth	.....
25	Creeky.	4.40	0	4.40	.....	1.7	.008	.006	Pres.	.4	.....	No growth	.....
26	Creeky.	27.80	5.20	22.60	.....	1.5	Trace.	.004	0	.45	.....	No growth	.....
27	None.	221.0	80.0	141.0	.....	76.3	0	.010	.002	8.0	.....	No growth	.....
28	None.	95.00	26.30	68.70	.....	11.3	0	.008	Trace.	0	.....	No growth	.....
29	Fairy.	45.00	11.20	33.80	.....	1.3	0	.006	Trace.	.04	.....	No growth	.....
30	None.	47.00	14.00	33.00	.....	2.3	Trace.	.023	0	4.0	.....	No growth	.....

SANITARY WATER ANALYSIS—Continued.

Number.	County.	City or Town.	Name of Collector.	Date of Collec- tion.	Date of Analysis.	Well, River, Creek, Pond,	No. of Sanitary Survey.	APPEARANCE.		
								Turbidity.	Sediment.	Color.
31	Marion	Broad Ripple	J. W. Bates	July 10	Driven well			Slight	Very little	Clear.
32	Sullivan	Carlisle	G. W. Pirtle	July 13	Pond			Slight	Medium	Faint yellow.
33	Montgomery	Darlington	J. S. Coffman	July 17	Well				None	Faint yellow.
34	Montgomery	Darlington	J. S. Coffman	July 17	Well				Little	Clear.
35	Montgomery	Darlington	J. S. Coffman	July 17	Well			Slight	Little	Faint yellow.
36	Jackson	Seymour	M. F. Gerrish	July 17	Tap			Slight	Little	Faint yellow.
37	Greene	Bloomfield	N. R. Lender	July 19	Cistern				None	Faint yellow.
38	Jackson	Seymour	M. F. Gerrish	July 17	Tap			Slight	Little	Faint yellow.
39	Marion	Broad Ripple	J. W. Bates	July 21	Dug well			Slight	Very little	Clear.
40	Marion	Broad Ripple	J. W. Bates	July 21	Driven well			Slight	Very little	Clear.
41	Wabash	Wabash	I. H. Ford	July 20	Well			None	None	Clear.
42	Jackson	Seymour	Geo. C. Graessle	July 24	Tap			Slight	Medium	Faint yellow.
43	Jackson	Seymour	Geo. C. Graessle	July 24	Tap			Slight	Very little	Faint yellow.
44	Marion	Broad Ripple	J. W. Bates	July 27	Well			None	None	Clear, milky
45	Jackson	Seymour	Geo. C. Graessle	July 28	Tap			Slight	Medium	Ft vel. little.
46	Marshall	Culver	B. W. Wiseman	July 28	Lake			Slight	Very little	Clear.
47	Marshall	Culver	B. W. Wiseman	July 28	Lake			Slight	None	Clear.
48	Jackson	Seymour	Geo. C. Graessle	July 30	Tap			Slight	Very little	Milky.
49	Marshall	Culver	B. W. Wiseman	July 31	Well			Slight	Very little	Milky yellow
50	Marshall	Culver	B. W. Wiseman	July 31	Well			Slight	Very little	Milky yell. w
51	Marion	Broad Ripple	J. W. Bates	July 31	Dug well			None	Very little	Faint yellow
52	Jackson	Seymour	Geo. T. Graessle	Aug. 2	Tap			Great.	Abundant	Milky yellow
53	Marshall	Culver	B. W. Wiseman	Aug. 2	Well			None	None	Clear.
54	Decatur	Westport	O. F. Welch	Aug. 5	Well			Slight	Very little	None.
55	Bartholomew	Columbus	S. M. Voris	Aug. 7	Well			Slight	Moderate	None.
56	Decatur	Westport	O. F. Welch	Aug. 12	Well			None	None	None.
57	Hamilton	Cicero	F. M. Warford	Aug. 12	Well			Great.	Abundant	Milky.
58	Carroll	Delph	F. M. Warford	Aug. 12	Well			Slight	Very little	Little cloudy.
59	Carroll	Delph	W. F. Sharret	Aug. 16	Well			Slight	Very little	None.
60	Delaware	Muncie	Wm. E. McChilus	Aug. 19	Well			Great.	Abundant	Yellow, dirty

SANITARY WATER ANALYSIS—Continued.

Number.	Odor.	SOLIDS.			Color After Ignition.	Chlorine.	NITROGEN AS				Oxygen Absorbed	Growth in Carbol-bullion.	Remarks.	
		Total.	Loss on Ig- nition.	Fixed.			Free Am- monia.	Aluminoid	Nitrates.	Nitrites.				Nitrates.
31	None.....	46.60	11.00	35.60	.....	1.5	0	.030	0	.....	.....	Growth.....	
32	Very bad.....	28.80	10.00	18.80	.....	0	.064	.070	0	0	.....	Growth.....	
33	Creeky.....	46.00	16.00	30.00	.....	1.1	.022	0	0	0	.....	No growth.....	
34	None.....	42.00	11.80	30.20	.....	1.3	Pres.	0	0	0	.....	No growth.....	
35	Faint.....	86.00	34.00	50.00	.....	3.1	0	0	0	0	.....	No growth.....	
36	Faint.....	47.00	16.00	31.00	.....	1.4	0	.014	Pres.	0	.....	Growth.....	
37	Creeky.....	10.00	4.00	6.00	.....	1.6	0	Pres.	0	0	.....	No growth.....	
38	Faint.....	33.40	6.40	27.40	.....	1.3	0	.011	Pres.	0	.....	Growth.....	
39	Faint.....	64.20	19.00	45.20	.....	3.4	0	.006	0	0	.....	No growth.....	
40	None.....	65.40	22.60	42.80	.....	2.2	0	0	0	0	.....	No growth.....	
41	Faint.....	176.40	50.00	126.4	White.....	29.0	0	.003	0	.004	.....	No growth.....	
42	Creeky.....	38.00	9.60	16.40	Brown.....	1.1	.004	.012	Trace.	Trace.	.....	Growth.....	
43	Creeky.....	27.30	10.60	16.60	Brown.....	1.0	0	.024	0	Trace.	.....	Growth.....	
44	None.....	73.40	21.20	49.20	White.....	4.8	.140	Trace.	0	.4	.....	No growth.....	
45	Faint.....	22.40	4.60	17.80	Brown.....	.9	0	.010	0	Trace.	.....	No growth.....	
46	Creeky.....	8.20	2.80	5.40	Black.....	1.0	Trace.	.013	0	0	.....	Growth.....	
47	Creeky.....	8.20	5.80	2.40	Black.....	1.0	Trace.	.008	0	0	.....	Growth.....	
48	Creeky.....	24.00	5.80	18.40	Brown.....	.9	.012	.013	Trace.	.005	.....	Growth.....	
49	Faint.....	32.20	4.60	27.60	Brown.....	.7	.011	.018	0	0	.....	Growth.....	
50	Faint.....	34.00	3.40	30.60	Brown.....	.8	.016	Trace.	0	0	.....	No growth.....	
51	Sour.....	29.00	14.00	15.00	Brown.....	1.5	.014	0	Trace.	Trace.	.....	No growth.....	
52	Musty, creeky.....	23.00	7.14	15.86	Brown.....	1.0	.004	.038	Trace.	.01	.....	Growth.....	
53	Faint.....	38.40	7.40	29.00	White.....	1.9	0	.04	.015	.04	.....	No growth.....	
54	None.....	33.00	31.00	62.00	Light brown.....	22.0	0	.005	.01	.04	.....	No growth.....	
55	Faint.....	86.20	21.20	65.00	White.....	7.4	0	.008	.08	.09	.....	Growth.....	
56	None.....	153.20	46.00	107.20	White.....	34.0	0	.004	.04	.16	.....	Growth.....	
57	Musty, creeky.....	81.00	13.00	68.00	Brown.....	3.0	.004	.016	Pres.	.01	.....	Growth.....	
58	Faint.....	54.80	18.80	36.00	White.....	4.3	.015	0	.04	.02	.....	Growth.....	
59	Faint.....	56.40	40.80	15.60	White.....	1.9	0	0	.01	.08	.....	No growth.....	
60	Slight.....	46.20	13.60	32.60	Brown.....	1.2	.024	.006	.04	0	.....	No growth.....	

SANITARY WATER ANALYSIS—Continued.

Number.	County.	City or Town.	Name of Collector.	Date of Collection.	Date of Analysis.	Well, River, Creek, Pond, Spring.	No. of Sanitary Survey.	APPEARANCE.		
								Turbidity.	Sediment.	Color.
61	Fountain...	Veedersburg...	W. R. Stout...	Aug. 20...	Aug. 21...	Well...	...	Slight...	Very little...	None.
62	Fountain...	Fountain...	W. R. Stout...	Aug. 20...	Aug. 21...	Well...	...	Slight...	Very little...	None.
63	Orange...	Paoli...	C. L. Boyd...	Aug. 19...	Aug. 22...	180 ft. deep well...	...	None...	None...	None.
64	St. Joseph...	Walkerton...	H. D. Dennant...	Aug. 20...	Aug. 22...	Dug well...	...	Slight...	Slight...	None.
65	Johnson...	Franklin...	J. L. Griffith...	Aug. 21...	Aug. 23...	Dug well...	...	None...	Slight...	None.
66	Marion...	Broad Ripple...	J. W. Bates...	Aug. 23...	Aug. 24...	Dug well...	...	Slight...	Slight...	F'nt yel. tint.
67	Bartholomew...	Columbus...	G. T. McCoy...	Aug. 31...	Sept. 2...	Dug well...	...	None...	None...	None.
68	Bartholomew...	Columbus...	G. T. McCoy...	Sept. 1...	Sept. 2...	Well...	...	Faint...	Slight...	None.
69	Marion...	State Fair Ground...	J. W. Bates...	Sept. 3...	Sept. 4...	Driven well...	...	None...	Slight...	None.
70	Marion...	Cumberland...	C. L. Ward...	Sept. 5...	Sept. 7...	Well...	...	None...	Slight...	None.
71	Marion...	Cumberland...	C. L. Ward...	Sept. 6...	Sept. 7...	Well...	...	Moderate...	None...	None.
72	Marion...	Cumberland...	C. L. Ward...	Sept. 5...	Sept. 7...	Well...	...	None...	None...	None.
73	Wayne...	Richmond...	T. Henry Davis...	Sept. 7...	Sept. 8...	Tap W. W...	...	None...	None...	None.
74	Franklin...	Brookville...	Calvin Carter...	Sept. 8...	Sept. 9...	Well...	...	None...	None...	None.
75	Randolph...	Winchester...	T. A. Chenoweth...	Sept. 11...	Sept. 13...	Well...	...	None...	None...	None.
76	Wayne...	Richmond...	T. Henry Davis...	Sept. 10...	Sept. 11...	Tap...	...	None...	None...	None.
77	Carroll...	Delphi...	C. E. Angell...	Sept. 14...	Sept. 15...	Well...	...	None...	None...	None.
78	Green...	Linton...	H. A. Little...	Sept. 14...	Sept. 15...	Well...	...	None...	None...	None.
79	Wayne...	Richmond...	T. Henry Davis...	Sept. 15...	Sept. 16...	Tap...	...	Slight...	Very little...	Faint.
80	Laporte...	Laporte...	Dr. Darling...	Sept. 16...	Sept. 17...	Tap...	...	None...	None...	Faint yellow.
81	Sullivan...	Sullivan...	Jacob Mahley...	Sept. 18...	Sept. 20...	Pond...	...	Great...	Abundant...	Yellow.
82	Bartholomew...	Columbus...	Geo. T. McCoy...	Sept. 21...	Sept. 22...	Dug well...	...	None...	None...	None.
83	Rush...	Mays...	H. P. Bell...	Sept. 21...	Sept. 23...	Dug well...	...	None...	None...	None.
84	Rush...	Mays...	H. P. Bell...	Sept. 21...	Sept. 23...	Well...	...	None...	None...	None.
85	Greene...	Linton...	H. A. Little...	Sept. 23...	Sept. 25...	Well...	...	None...	None...	None.
86	Green...	Linton...	H. A. Little...	Sept. 23...	Sept. 25...	Well...	...	None...	None...	None.
87	Green...	Linton...	H. A. Little...	Sept. 23...	Sept. 25...	Well...	...	None...	None...	None.
88	Green...	Linton...	H. A. Little...	Sept. 23...	Sept. 25...	Well...	...	None...	None...	None.
89	Jasper...	Rensselaer...	S. Curtis Johnson...	Sept. 25...	Sept. 27...	Driven well...	...	None...	Sand...	None.
90	Scott...	Scotsburg...	F. C. Sawyer...	Sept. 30...	Oct. 1...	Well...	...	None...	None...	None.

SANITARY WATER ANALYSIS—Continued.

Number.	Odor.	SOLIDS.		Color After Ignition.	Chlorine.	NITROGEN AS				Oxygen Absorbed	Growth in Carbol-bullion.	Remarks.
		Total.	Loss on Ignition.			Free Ammonia.	Albuminoid Ammonia.	Nitrates.	Nitrates.			
61	Faint.....	30	8	White.....	1.6	0	.002	.04	.08	.....	Cloudy, no indol.	
62	Creeky.....	34	10	White.....	1.5	.03	.004	.16	.17	.....	Cloudy, no indol.	
63	None.....	38	8	White.....	0	.002	.001	.003	0	.....	No growth.	
64	Faint.....	51	20	Brown.....	5	.004	.014	.003	.02	.....	Cloudy, indol.	
65	Faint.....	176	31	Brown.....	2.8	.006	.008	.003	.04	.....	Cloudy, no indol.	
66	Faint.....	30	10	White.....	1.5	.004	.001	.002	.02	.....	Cloudy, no indol.	
67	Faint.....	71.2	23.2	White.....	4.5	.001	.004	Trace.	.02	.....	Cloudy.....	
68	Faint.....	71.8	21.7	White.....	4.4	.001	.004	Trace.	.02	.....	Cloudy.....	
69	None.....	59.8	18.7	White.....	1.3	.001	.006	.007	.11	.....	Cloudy.....	
70	None.....	57.4	11.4	White.....	5.8	Trace.	.007	.08	.013	.....	No growth.....	
71	None.....	106.0	33	White.....	18.7	.001	.002	.12	.060	.....	No growth.....	
72	Creeky.....	75.4	21.0	White.....	7.5	.002	.008	.04	.015	.....	No growth.....	
73	None.....	37.8	8.2	White.....	1.5	.004	.002	.001	.005	.....	Clear.....	
74	Creeky.....	51.0	10.0	White.....	5.6	0	.002	.001	.005	.....	Cloudy.....	
75	Creeky.....	62.0	15.0	White.....	6.0	.001	.002	.05	.08	.....	Cloudy.....	
76	None.....	36.5	5.0	White.....	1.3	0	.004	.001	.007	.....	Cloudy.....	
77	None.....	41.2	14.0	White.....	3.1	.001	.002	.002	.006	.....	Cloudy.....	
78	Creeky.....	57.4	20.0	White.....	11.1	.001	.002	.001	.03	.....	No growth.....	
79	Slight.....	54.4	7.7	White.....	1.2	0	.003	0	.005	.....	No growth.....	
80	Slight.....	61.3	7.2	Brown.....	4.9	.08	0	0	0	.....	No growth.....	
81	Very bad.....	54.0	14.0	Black.....	3.8	.96	.98	.005	0	.....	No growth.....	
82	None.....	75.6	15.4	White.....	4.8	.008	.006	.005	.06	.....	No growth.....	
83	Slight.....	38.0	7.6	White.....	1.9	.001	.002	.005	.05	.....	No growth.....	
84	Slight.....	35.0	10.0	White.....	1.6	.08	.06	.02	.04	.....	No growth.....	
85	None.....	21.3	9.0	White.....	1.6	.06	.06	.02	.04	.....	No growth.....	
86	None.....	53.4	15.4	White.....	8.2	.06	.005	0	.08	.....	No growth.....	
87	Slight.....	23.2	5.6	White.....	9.5	.001	0	.07	.10	.....	No growth.....	
88	None.....	49.6	14.0	White.....	9.7	0	.005	.06	.05	.....	No growth.....	
89	None.....	15.4	4.4	White.....	0	.003	.006	0	0	.....	No growth.....	
90	None.....	54.6	24.0	White.....	8.7	0	.005	.16	.24	.....	No growth.....	

SANITARY WATER ANALYSIS—Continued.

Number.	County.	City or Town.	Name of Collector.	Date of Collection.	Date of Analysis.	Well, River, Creek, Pond, Spring.	No. of Sanitary Survey.	APPEARANCE.		
								Turbidity.	Sediment.	Color.
91	Scott	Scottsburg	F. C. Sawyer	Sept. 30.	Oct. 1.	Driven well	...	Great.	Abundant	Milky, dirty.
92	Laporte	Laporte	Jas. F. West	Oct. 16	Oct. 9	Tap	...	None	None	Faint yellow.
93	Franklin	Brookville	S. M. Voris	Oct. 17	Oct. 19	Well	...	None	None	Slightly milky.
94	Bartholomew	Columbus	S. M. Voris	Oct. 17	Oct. 20	Well	...	Slight	Medium	Faint yellow.
95	Bartholomew	Columbus	S. M. Voris	Oct. 17	Oct. 20	Well	...	None	None	None.
96	Carroll	Delphi	J. A. Sims	Oct. 19	Oct. 20	Well	...	None	None	None.
97	Washington	Rush Creek Valley	H. M. Paynter	Oct. 27	Oct. 28	Well	...	Slight	Medium	Deep yellow.
98	Randolph	Winchester	T. A. Chenoweth	Oct. 30	Nov. 1	Well	...	Slight	Medium	Milky.
99	Carroll	Delphi	W. T. Sharrer	Oct. 30	Nov. 1	Dug well	...	None.	None	None.

SANITARY WATER ANALYSIS—Continued.

Number.	Odor.	SOLIDS.			Color After Ignition.	Chlorine.	NITROGEN AS				Oxygen Absorbed	Growth in Carb. bullion.	Remarks.
		Total.	Loss on Ignition.	Fixed.			Free Ammonia.	Albuminoid Ammonia.	Nitrates.	Nitrates.			
91	Slight	95.2	19.2	76.0	Brown	9.3	0	.006	0	0	...	Clear	
92	Slight	28.9	14.4	11.6	Brown	.9	.010	.027	.120	0	...	Clear	
93	Faint	33.8	9.8	24.0	Light brown	1.3	0	.006	0	.005	...	Clear	
94	Creeky	41.0	15.4	25.6	Brown	1.2	.016	.001	.02	0	...	Clear	
95	None	53.0	21.0	32.0	Brown	24.5	0	0	0	0	...	Cloudy	
96	None	118.2	71.0	47.2	Brown	2.6	.009	0	.04	.08	...	Cloudy	
97	Creeky	80.4	18.4	61.4	Brown	40+	.003	0	.002	0	...	Cloudy	
98	None	34.0	5.0	29.0	Brown	.6	.018	.001	0	0	...	Cloudy	
99	Bad	62.0	21.6	40.4	White	4.3	0	.004	.002	.005	...	Cloudy	

APPENDIX.

THE FIRST ANNUAL REPORT

OF THE

State Board of Medical Registration and Examination

FOR THE YEAR BEGINNING APRIL 29, AND ENDING

DECEMBER 31, 1897.

TO THE GOVERNOR.

OFFICERS AND MEMBERS OF THE BOARD.

1897.

J. C. WEBSTER, M. D., PresidentLaFayette, Ind.
W. T. GOTT, M. D., Vice-President.....Crawfordsville, Ind.
W. F. CURRYER, M. D., Secretary.....Indianapolis, Ind.
JAS. M. DINNEN, M. D., Treasurer.....Ft. Wayne, Ind.
W. A. SPURGEON, M. D.....Muncie, Ind.

OFFICERS AND MEMBERS OF THE BOARD.

1898.

W. T. GOTT, M. D., President.....Crawfordsville, Ind.
W. A. SPURGEON, M. D., Vice-President.....Muncie, Ind.
W. F. CURRYER, M. D., Secretary.....Indianapolis, Ind.
JAS. M. DINNEN, M. D., TreasurerFt. Wayne, Ind.
J. C. WEBSTER, M. D.....LaFayette, Ind.

To His Excellency, James A. Mount, Governor:

The members of the State Board of Medical Registration and Examination have the honor to submit herewith a condensed report of their proceedings from April 29th, the date of their organization, to December 31st, 1897. They take this opportunity to express and record their obligations to your Excellency and those connected with the executive department, for the uniform kindness and courtesy received at your hands; to Attorney-General Ketcham, and his able and obliging deputy, Mr. Merrill Moores, for legal advice and untiring efforts in behalf of honorable medicine; and to the Honorable State Board of Health, by whose courtesy alone they are enabled to publish this report.

The magnitude and importance of the work of instituting the office of Medical Registration and Examination, created by the existing medical act, and changing the status of all the physicians and midwives of the State to conform thereto, has imposed upon the Board a vast amount of work.

Innovation of an established usage, especially when affecting the pursuit of one's vocation, naturally causes a feeling of temporary annoyance; but the great body of physicians of the State, with a few exceptions, cheerfully complied with the requirements of the law. To these, it has been the desire and constant endeavor of the Board to cause as little inconvenience as a proper administration of the office will permit; but it was confronted by a large number of applicants, some of whom were refugees from other States where they had been barred from practice for want of qualification, and others who, anticipating the passage of the existing act, then pending, hastened to obtain diplomas from alleged schools of medicine so utterly disreputable as to require but little if anything more than a commercial consideration for graduation. Upon these so-called diplomas they secured licenses to practice medicine in this State, on the very easy terms of the law of 1885, which only requires of the applicant that he make affidavit that the diploma which he presented was issued by a reputable school of medicine and that he was the legal possessor of the same. Upon these licenses they demanded certificates from the Board to enable them to legally engage in the practice of medicine. The Board, believing

that the object of the law was to protect the public from the ignorant and unscrupulous practitioners of medicine, refused to comply with their demands. Thereupon, they brought action in the courts to compel the Board to issue certificates to them, and suits are now pending which involve the right of the Board to refuse a certificate on a license procured by fraud and misrepresentation.

The subterfuges resorted to by these persons to evade the requirements of the law made it necessary for the Board to closely scrutinize all applications to avoid imposition, thus complicating and increasing their duties to such extent that more time and clerical assistance were required than were at first contemplated. Under the law, the only fund available for the cost of instituting and conducting the office, is that created by the receipts from registration and examination, and the Board early foresaw that to avoid a deficit, which it has done, the most rigid economy must be observed. This fund is inadequate to equip the office as the safety of its records require, and to publish an annual report of its proceedings, which, we beg to suggest the public importance of the office warrants.

A schedule of requirements of medical colleges has been adopted. The medical colleges of the State have been inspected and the diplomas of those whose standard of teaching was found to be up to the requirements, are recognized. Measures have been taken to enforce the provisions of the law as they shall be interpreted by the courts. The time is at hand when a higher degree of proficiency is required in all the useful vocations, from the highest to the lowest, and, surely no exception should be made of a profession, the practice of which so nearly concerns the public health and comfort.

In conclusion, the Board beg to express their belief, based on their observation during the first year of the existence of the law, that if it shall be sustained by the courts it will in the not distant future, by requiring a higher standard of proficiency in the medical profession, result in inestimable benefit to the public and demonstrate that it was enacted in the interest of the people and not alone in that of the medical profession.

Respectfully submitted,

J. C. WEBSTER, M. D.,

President.

W. F. CURRYER, M. D.,

Secretary.

CONDENSED REPORT
OF THE
Indiana State Board of Medical Registration and Examination,
FOR THE YEAR 1897.

The State Board of Medical Registration and Examination was created and its duties defined by an act of the General Assembly, approved March 8, 1897, entitled "An Act regulating the practice of Medicine, Surgery and Obstetrics, providing for the issuing of licenses to practice, providing for the appointment of a State Board of Medical Registration and Examination, and defining their duties, etc., as follows:

CHAPTER CLXIX.

AN ACT regulating the practice of medicine, surgery and obstetrics, providing for the issuing of licenses to practice, providing for the appointment of a State Board of Medical Registration and Examination and defining their duties, defining certain misdemeanors and providing penalties, and repealing all laws in conflict therewith and certain acts therein specified.

[H. 226. Approved March 8, 1897.]

Section 1. Be it enacted by the General Assembly of the State of Indiana, That it shall hereafter be unlawful for any person to practice medicine, surgery or obstetrics in this State without first obtaining a license so to do, as hereinafter provided.

Sec. 2. After this law goes into effect any person desiring to begin the practice of medicine, surgery or obstetrics in this State, shall procure from the State Board of Medical Registration and Examination a certificate that such person is entitled to a license to practice medicine, surgery and obstetrics in the State of Indiana; and in order to procure such certificate the applicant shall submit to the State Board of Medical Registration and Examination his diploma, with an affidavit setting forth the time and under what circumstances said diploma was received, and

that the affiant is the person to whom such diploma was issued. Such application shall be accompanied by the affidavits of two freeholders resident in the same county in which the applicant resides, stating that the applicant is the person named in the accompanying diploma and application for a certificate. All diplomas received by the Board shall be returned to the person owning the same. Such applicant shall pay to said Board the sum of six dollars (\$6.00) at the time of making such application. All persons practicing medicine, surgery and obstetrics in the State of Indiana when this law goes into effect, and desiring to continue the same, shall, within ninety days thereafter, obtain a certificate that they are entitled to do so by presenting to the State Board of Medical Registration and Examination the license possessed by them at the time of the passage of this law, together with an affidavit that they are the legal possessors of the same, and the persons mentioned therein, and such applicants shall pay to the Board the sum of one dollar (\$1.00) at the time of making such application. The Board shall thereupon issue to such applicant a certificate, which, when presented to the County Clerk of the proper county, shall entitle the holder to a license to practice medicine, surgery and obstetrics in the State of Indiana. In the event an applicant for a certificate from the State Board of Medical Registration and Examination shall present a diploma from a medical college which is not recognized as maintaining a sufficiently high grade or standard of medical education as defined and fixed in the records of the Board, the applicant shall have the privilege of being examined as to his qualifications to practice medicine, surgery and obstetrics in such manner as the Board shall provide, and if he shall pass an examination satisfactorily to the Board he shall receive a certificate, the same as if he had presented a satisfactory diploma and other evidences of qualifications for the practice of medicine. But if he should fail to pass such examination he shall be permitted to submit to another examination within twelve months from the time of first examination. He shall pay to the State Board of Medical Registration and Examination the sum of twenty-five dollars (\$25.00), fifteen dollars (\$15.00) of which sum shall be returned to him in the event of his failing to pass said examination: Provided, however, That payment of said sum of twenty-five dollars (\$25.00) shall entitle him to a re-examination in case

of failure at [the] first or any subsequent examination: And provided, further, That if such applicant shall fail to pass the examination prescribed by such Board of Medical Registration and Examination, he shall have the right to an appeal to the Circuit or Superior Court of the proper county, requiring such Board to show cause why such applicant should not be permitted to practice medicine, surgery or obstetrics in the State of Indiana, upon the applicant's giving a good and satisfactory bond to be approved by the Court, to secure all costs of suit should the appeal be determined against him. Upon the receipt of the certificate by the applicant from the State Board of Medical Registration and Examination, the applicant shall, upon the presentation thereof to the Clerk of the county in which he resides, receive from the County Clerk a license to practice medicine, surgery and obstetrics within the State of Indiana. The person receiving such license shall pay to the County Clerk fifty cents (\$0.50) as his fee for issuing and recording such license as hereinafter provided. In case of change of residence from one county to another within the State, the holder of a physician's license shall obtain a new license in the county where he proposes to reside, by filing with the County Clerk the license obtained by him in the county in which he last resided, in the same manner as provided for on the presentation of his certificate from the State Board of Medical Registration and Examination, and the Clerk shall issue him a new license.

Sec. 3. It shall be the duty of the Clerk of the county in which an applicant resides to issue to the person presenting such certificate, as hereinbefore provided for, a license under his official seal in the following form:

State of Indiana, County of, ss:

I,, Clerk of the Circuit Court of County, in the State of Indiana, do hereby certify that has complied with the laws of the State of Indiana relating to the practice of medicine, surgery and obstetrics in the county and State aforesaid.

Witness my hand and seal of said Court this day of, 189..

. Clerk.

The County Clerk shall enter on record the name, age, place of birth, address, school or system of medicine to which said applicant belongs, and the person so registering shall subscribe to and verify by oath before such Clerk an affidavit concerning such facts, which, if willfully false, shall subject the affiant to conviction for perjury. The County Clerk shall furnish annually, on the first day of January, to the State Board of Medical Registration and Examination, upon blanks furnished by said Board, a duplicate list of all certificates received and licenses issued by him during the preceding year, and shall include therein the date of issue of said license, and the name, age and residence of the person receiving the same.

Sec. 4. Within thirty days after this law goes into effect, it shall be the duty of the Governor of the State of Indiana to appoint a State Board of Medical Registration and Examination, composed of five (5) members, who shall serve, two for one year, one for two years, one for three years and one for four years; and their successors for a term of four years each. No school or system of medicine shall have a majority representation on such Board. Said Board shall be non-partisan, and not more than three shall be members of any one political party. The Governor shall select members of said Board of Medical Registration and Examination from reputable physicians in this State who are graduates of any college of medicine of good repute: Provided, That no professor or teacher in a medical college shall be appointed as a member of such Board: Provided, further, That each of the four schools or systems of medicine having the largest numerical representation in the State shall have at least one representative on said Board. Should a vacancy occur in said Board by death, resignation, removal, or otherwise, then it shall be the duty of the Governor to fill the vacancy from the school or system entitled to representation by virtue of such vacancy. The Governor shall have power to remove any member of said Board for incompetency, gross immorality, for any abuse of his official power, or for other good cause, and may fill any vacancy thus occasioned by appointment. Any person appointed to fill any vacancy on such Board, whether occasioned by death, resignation, removal or otherwise, shall hold for the unexpired term of the member whose place he is appointed to fill.

Sec. 5. It shall be the duty of the members of the State Board

of Medical Registration and Examination to meet in the city of Indianapolis within thirty days after their appointment, and organize by the election of a President, Secretary and Treasurer, who shall serve until the second Tuesday in January following, and their successors shall be elected on the second Tuesday in January annually thereafter. The said Board shall hold regular meetings on the second Tuesday in January, April, July and October of each year, and as often in addition as may be necessary for the transaction of such business as may properly come before it under the provisions of this act, and shall have power to make all necessary rules and regulations for the transaction of its business. For their services the members shall receive the sum of ten dollars (\$10.00) per day, and their traveling expenses necessarily incurred in attendance upon such meetings. It shall be the duty of said Board to keep a record of all applications for certificates, and such record shall contain all the facts set forth in such applications, including the action of the Board thereon, and the said Board may employ a clerk, and fix his salary at not more than one thousand dollars (\$1,000.00) per annum. It shall be the duty of the Treasurer of said Board to pay quarterly all moneys received by the Board to the Treasurer of the State, which moneys shall be credited to a separate and permanent fund for Medical Registration and Examination, which is hereby created. All moneys so paid to the Treasurer of State shall remain and be a separate and permanent fund for the maintenance of the said Board of Registration and Examination. The said Board shall, by its President and Secretary, from time to time, certify to the Auditor of State, the necessary expenses incurred by the said Board, including the salaries and per diem of the members, and the Auditor shall issue his warrant for the same, which shall be paid out of the fund so established for the maintenance of the said Board: Provided, That no order shall be drawn by any State official on any fund other than the above-named fund for any salaries, printing or stationery, or other expenses incident to the administration of this act. The Treasurer and Secretary of said Board shall each give bond in the sum of ten thousand dollars (\$10,000.00) with sureties to be approved by the Governor, which bonds shall be filed with the Auditor of State. The members of the State Board of Medical Registration and Examination are authorized to administer oaths in matters relating

to the discharge of their official duties. The State Board of Medical Registration and Examination is charged with the duty of enforcing this act, and it shall be the duty of the Prosecuting Attorney, upon the complaint of the Board, to prosecute any violation of this act. The State Board of Medical Registration and Examination shall from time to time establish and record in a record, kept by them for that purpose, a schedule of the minimum requirements which must be complied with by applicants for examination for license to practice medicine, surgery and obstetrics, before they shall be entitled to receive such license. The said Board shall also, in like manner establish and cause to be recorded in such record a schedule of the minimum requirements and rules for the recognition of medical colleges, so as to keep these requirements up to the average standard of medical education in other States. After the year 1897 no change shall be made in such schedules of requirements in any year, after the month of January of such year, nor shall any change be made to have any retroactive effect, or that shall affect students theretofore matriculated. Such records shall at all times be open to examination by the public, and the said schedules of requirements, after they have been established and recorded, and all changes made therein, shall be printed in circular form, and mailed to all medical colleges in the State, and shall also be furnished to any person upon application. Said Board shall not, in the establishment of the aforesaid schedules of requirements, discriminate for or against any school or system of medicine, nor shall it prescribe what system or systems or schools of medicine shall be taught in any of the colleges, universities or other educational institutions of the State. It shall have power to make and establish all necessary rules and regulations for reciprocal recognition of certificates issued by other States, and to prevent unjust and arbitrary exclusions by other States of graduates in medicine from this State who have filled its requirements. When an application for a certificate is made and a diploma submitted, as herein provided, it shall be the duty of the State Board of Medical Registration and Examination to determine, upon the evidence presented, whether such diploma rightfully belongs to and was issued to the person making application for a certificate, and whether the medical college that issued the diploma maintains a standard of medical education conforming to that fixed by the State Board of Medical

Registration and Examination, and whether the application otherwise complies with the rules of the Board. If these facts are shown by competent evidence, it shall be the duty of the State Board of Medical Registration and Examination to issue a certificate, signed by its President and Secretary, and under its official seal, stating that the person applying for such certificate and possessing such diploma is entitled to a license to practice medicine, surgery and obstetrics in the State of Indiana. The State Board of Medical Registration and Examination shall have the right to review the evidence upon which a license has been obtained, and if it shall be found that a license has been obtained by fraud or misrepresentation, the Board may revoke such license. The Board may refuse to grant a certificate to any person guilty of felony or gross immorality, or addicted to the liquor or drug habit to such a degree as to render him unfit to practice medicine or surgery, and may, after notice and hearing, revoke a certificate for like cause. An appeal may be taken from the action of the Board. If any person holding a license under the provisions of this act shall be guilty of any of the above enumerated acts, the license of such person may be revoked by the Board, upon the finding and judgment as hereinafter provided that the holder thereof has been guilty of any of the above enumerated acts. A specific written charge, verified by affidavit, must be presented to the Board, making definite and specific charges of such offense against the holder of such license. It shall thereupon be the duty of the Board to refer such verified charge to the Circuit Court of the county in which the holder of such license resides. The Clerk of such court shall thereupon docket the same as a cause pending in said court. The said verified charge shall be treated as a complaint, and summons shall issue thereupon to the accused, as in ordinary civil cases. The accused may appear and plead to said charge and issue may be formed thereon, as in civil cases, which shall thereupon be tried by the Judge of said Circuit Court. It shall be the duty of the Prosecuting Attorney of said circuit to appear in such causes and represent the Board. The only finding and judgment in such cases shall be guilty or not guilty as to each charge. The judgment of the Court upon such charges shall be at once certified to the Board by the Clerk of said court. If the finding of the court is "guilty" as to any one of said charges, said Board may thereupon make an order revoking such

license. If judgment of "guilty" is awarded in such cause, the costs of such proceeding shall be recovered of the accused and a fee of ten dollars (\$10.00) shall be taxed therein in favor of the Prosecuting Attorney.

Sec. 6. All persons practicing midwifery in this State, and who have practiced it for ten years last preceding the passage of this act, and desiring to continue the same, shall, within ninety (90) days thereafter, make application to the State Board of Medical Registration and Examination by submitting an affidavit, fully attested, giving the name, age, residence, the length of time during which, and the place or places at which the applicant has been engaged in such practice, and the special education, if any, which the applicant has received for such practice. Such application shall be accompanied by the affidavits of two freeholders, duly attested, that the applicant is known to them as the person applying for a certificate to practice midwifery, and that such applicant has been engaged in the active practice of midwifery, giving the location or locations of such practice for at least ten (10) years previous to the passage of this act. Upon such application and the payment of one dollar (\$1.00) the State Board of Medical Registration and Examination shall issue to the applicant a certificate, which shall, when presented to the County Clerk, entitle the holder to a license to practice midwifery in this State. All persons desiring to enter upon the practice of midwifery in this State after this law goes into effect shall present to the State Board of Medical Registration and Examination their diplomas, duly attested, and procure[d] from an obstetrical school of such standing as shall be recognized and determined by the Board; or shall submit to such examination in midwifery as the Board shall require, and pay a fee of three dollars (\$3.00). Such evidence of qualification being satisfactory to the Board, it shall issue a certificate entitling the holder to a license from the Clerk of the county in which the applicant resides, which license shall entitle the holder to practice midwifery in this State. The license thus issued shall conform to all requirements of registration imposed upon physicians' licenses in section two of this act and shall be subject to revocation for the same cause as provided in section five in case of license to physicians.

Sec. 7. Nothing in this act shall be [so] construed as to discriminate against any school or system of medicine, or to prohibit

gratuitous services in cases of emergency, or to the administration of family remedies. This act shall not apply to any commissioned officer of the United States Army, Navy or Marine Hospital Service in the discharge of his official duties; nor to any physician or surgeon who is legally qualified to practice in the State or Territory in which he resides when in actual consultation with a legal practitioner of this State; nor to any physician or surgeon residing on the border of a neighboring State and duly authorized to practice under the laws thereof, whose practice extends into the limits of this State: Provided, That such practitioner shall not open an office or appoint a place to meet patients or receive calls within the limits of this State. This act shall not be construed to prevent medical students from practicing medicine and surgery under the immediate and direct supervision of a licensed physician, nor shall it apply to legally qualified dentists when engaged in the exclusive practice of dentistry, nor to any optician who shall hereafter engage in the practice of optometry. This law shall not be construed to apply to non-itinerant opticians engaged in the practice of optometry in this State at the time and prior to the passage of this act.

Sec. 8. To open an office for such purpose or to announce to the public in any way a readiness to practice medicine in any county of the State, or to prescribe for, or to give surgical assistance to those suffering from disease, injury or deformity, shall be to engage in the practice of medicine within the meaning of this act.

Sec. 9. Any person who shall practice medicine, surgery or obstetrics in this State without having a license duly issued as hereinbefore provided, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than twenty-five dollars (\$25.00) nor more than two hundred dollars (\$200.00).

Sec. 10. All laws and parts of laws in conflict with this act are hereby repealed, and also an act entitled "An act regulating the practice of medicine, surgery and obstetrics, providing for the issuing of license to practice, defining certain misdemeanors and providing penalties," approved April 11, 1885, and all amendments thereto be and the same are hereby repealed.

As directed by law the Governor appointed the State Board of Medical Registration and Examination, and convened it for organization on the 29th day of April, 1897, at the State House, in the city of Indianapolis, Indiana.

The following named appointees took the oath of office:

OFFICIAL BOARD.

J. C. WEBSTER, M. D., Lafayette, Ind.
 W. T. GOTT, M. D., Crawfordsville, Ind.
 W. F. CURRYER, M. D., Indianapolis, Ind.
 JAS. M. DINNEN, M. D., Fort Wayne, Ind.
 W. A. SPURGEON, M. D., Muncie, Ind.

The Board proceeded at once to organization by the election of J. C. Webster, M. D., President; W. T. Gott, M. D., Vice-President; W. F. Curryer, M. D., Secretary, and Jas. M. Dinnen, M. D., Treasurer.

The Attorney-General, Hon. W. A. Ketcham, came before the Board and gave his opinion touching some of the provisions of the law and duties of the Board.

Rule 1. Under said instructions the Board ruled that the County license, issued under the law of 1891, as well as those issued under the law of 1885, are valid, providing they were not obtained by fraud or misrepresentation, and are entitled to recognition by the provisions of the new law.

At the second meeting of the Board, held May 6, 1897, the election of a clerk was taken up and resulted in the selection of D. F. Urbahns, of Fort Wayne, Ind., at a salary of \$60 per month, and the Treasurer and Secretary and Clerk of the Board were instructed to furnish bond as provided by the law.

After discussion the following forms of application were adopted:

FORM No. 1.

APPLICATION FOR CERTIFICATE UPON DIPLOMA TO THE STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION OF THE STATE OF INDIANA.

I herewith present my Diploma, bearing date....., 18.., issued by College, of, State of, a legally chartered Medical Institution, accompanying which is my affidavit, duly attested, stating that I am the person named in the Diploma, and the lawful possessor of the same, and giving my age and the time spent in the study of medicine. I submit my Diploma for verification, and request the Board to issue its certificate finding that I am a graduate of Medicine, Surgery and Obstetrics, of a legally chartered Medical Institution in good standing, as defined by your Board, and that I am entitled to a license to practice Medicine, Surgery and Obstetrics in the State of Indiana.

I wish to be classed with School.

Respectfully,

.....

AFFIDAVIT OF APPLICANT.

State of Indiana, County, ss:

....., being duly sworn, says: I am a resident of, County of, Indiana, my address being Street, No. I am years of age. I have spent years..... months in the study of medicine at the places, under the preceptors and during the periods following:

At, State of, under, M. D., from....., 18., to 18..

At, State of, under, M. D., from, 18., to 18..

I matriculated at College, in State of, in the month of, 18., and was graduated from..... College on the.....day of....., 18.. In addition to the foregoing qualifications as specified, I also state that I obtained my literary education atCollege (or High School), and was graduated from College (or High School),, 18.. I also received the degree of from College, 18..

The accompanying Diploma was issued to me by such institution at the date named. I am the person named in the accompanying Diploma, and am the lawful possessor of the same. I make this affidavit for the purpose of obtaining from the State Board of Medical Registration and Examination a certificate entitling me to a license from the Clerk ofCounty to practice Medicine, Surgery and Obstetrics in the aforesaid County and State.

.....
Signed in my presence, and sworn to before me, this day of, 18...
.....

NOTE.—This affidavit must be sworn to before a Notary Public or an officer authorized to administer oaths.

FREEHOLDER'S AFFIDAVIT.

State of Indiana.....County, ss:

..... and
being duly sworn, on their oaths, say that affiants are both resident freeholders of the county in which the above-named applicant for a certificate resides, and are well acquainted with such applicant, and say that said applicant is the person named in the accompanying Diploma ofCollege.....
.....
.....

Subscribed and sworn to before me, this day of, 18..
.....

Form No. 2.

APPLICATION FOR CERTIFICATE UPON LICENSE.

To the State Board of Medical Registration and Examination of the State of Indiana:

I herewith present my affidavit, duly attested, stating the period during which and the place at which I have been engaged in the practice of Medicine, Surgery and Obstetrics, and showing that, under the laws of Indiana in force at and prior to the time of the passage of the Act of March 8, 1897, I was a legal practitioner of Medicine, Surgery and Obstetrics in the State of Indiana.

I wished to be classed with.....School.

Respectfully,

AFFIDAVIT OF A LEGAL PRACTITIONER UPON LICENSE.

State of Indiana, County, ss:

.....being duly sworn, says: I am a resident of
....., County of, State of Indiana,
my address being Street, No..... I am
years of age. I have spent years and
months in the study of Medicine, Surgery and Obstetrics at the places,
under the preceptors, and for the periods following, namely:

At, State of, under
....., M. D., from, 18., to
18..

At, State of, under
....., M. D., from, 18., to
18..

I attended the following courses of instruction at the Medical Institutions named, to wit:

At College, in the City of.....,
State of, for months of the year 18..

At College, in the City of.....,
State of, for months of the year 18..

State whether a graduate or not a graduate, and if the former, give name of institution and date of graduation

I have been engaged in the practice of Medicine, Surgery and Obstetrics at my present place of residence since, 18..
I have altogether been engaged continuously in the practice of Medicine, Surgery and Obstetrics for the period of years next preceding the date of this affidavit at the following places:

At, in the State of,
from, 18., to, 18..

At, in the State of,
from, 18., to, 18..

Accompanying this affidavit I produce a license issued to me by the Clerk of County, Indiana, on the day of, 18..

I am the person named in the accompanying license and am the lawful possessor of the same.

I make this affidavit for the purpose of obtaining from the State Board of Medical Registration and Examination a certificate entitling me to a license from the Clerk of County, Indiana, to practice Medicine, Surgery and Obstetrics in said County and State.

Signed in my presence, and sworn to before me, this day of 189..

NOTE.—This affidavit must be sworn to before a Notary Public or an officer authorized to administer oaths.

N. B.—The legal fee to accompany this is \$1.00.

Form No. 3.

APPLICATION OF A GRADUATE IN OBSTETRICS TO THE STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION OF INDIANA.

I herewith present my Diploma, bearing date, 18.., issued by College, of, State of, a legally chartered Medical Institution. Accompanying is my affidavit, duly attested, stating that I am the person named in the Diploma, and the lawful possessor of the same, and giving my age and the time spent in the study of Obstetrics. I submit my Diploma for verification, and request the Board to issue its Certificate finding that I am a graduate of Obstetrics, of a legally chartered Medical Institution in good standing, as defined by your Board, and that I am entitled to a license to practice Obstetrics in the State of Indiana.

Respectfully,

AFFIDAVIT OF GRADUATE IN OBSTETRICS.

State of Indiana, County, ss:

..... being duly sworn, says: I am a resident of, County of, State of Indiana, my address being Street, Number..... I am years of age. I have spent years months in the study of Obstetrics at the places, under the preceptors and during the periods following, at, State of, under, M. D., from, 18.., to, 18..; at, State of, under, M. D., from, 18.., to, 18.. I matriculated at College, in State of in the month of, 18.., and was

graduated at such institution on the day of, 18..

The accompanying Diploma was issued to me by such institution at the date named. I am the person named in the accompanying Diploma and am the lawful possessor of the same. I make this affidavit for the purpose of obtaining from the State Board of Medical Registration and Examination a certificate entitling me to a license from the Clerk of County to practice Obstetrics in said County and State.

.....
Signed in my presence, and sworn to before me, this day of, 189..

NOTE.—This affidavit must be sworn to before a Notary Public or an officer authorized to administer oaths.

NOTE.—Fee under this application is \$3.00.

FORM No. 4.

MIDWIFERY—APPLICATION FOR CERTIFICATE (10 YEARS' PRACTICE) TO THE STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION OF THE STATE OF INDIANA.

I herewith present my affidavit, duly attested, stating the period during which and at the place or places at which I have been engaged in the practice of Midwifery, and showing that, under the laws of Indiana in force at and prior to the time of the passage of the Act of March 8, 1897, I was a practitioner of Midwifery. I submit this affidavit for consideration, and request the Board to issue the certificate finding that I was a practitioner of Midwifery in the State of Indiana ten (10) years last preceding the passage of said Act of March 8, 1897, and that I am entitled to practice Midwifery in the State of Indiana, according to the requirements of said Act and the rules and regulations of your Board.

Respectfully submitted,

AFFIDAVIT OF A LEGAL PRACTITIONER OF MIDWIFERY.

State of Indiana, County, ss:

....., being duly sworn, says: I am a resident of, County of, State of Indiana, my address being Street, No..... I am years of age. I have spent years in the study of Obstetrics at the places, under the preceptors, and for the periods following, namely: At, State of, under, M. D., from 18.. to 18..; at, State of, under, M. D., from 18.. to 18.. I attended the following courses of instruction at the Medical Institutions named, to wit:

At College, in the City of
 State of....., for.....months in the year 18..
 at College, in the City of
 State of formonths in the year 18..
 I have been engaged in the practice of Midwifery for the period of.....
 years next preceding the date of this affidavit at the following places:
 At, in the State of, from
, 18., to, 18.; at
 in the State of, from, 18..
 to, 18.. I make this affidavit for the purpose of
 obtaining from the State Board of Medical Registration and Examination
 a certificate entitling the Clerk of County to issue to me
 a license to practice Midwifery in the aforesaid County and State.

Signed in my presence, and sworn to before me, this day of
, 189..

NOTE.—This affidavit must be sworn to before a Notary Public or an officer authorized to administer oaths.

NOTE.—Fee under this application is \$1.

AFFIDAVIT OF FREEHOLDERS TO BE FILED WITH APPLICATION FOR A CERTIFICATE TO PRACTICE MIDWIFERY.

State of Indiana, County, ss:

The undersigned, each being duly sworn, do depose and say they are
 resident freeholders of the County of, in the State of
 Indiana; that the postoffice address of
 is; that the postoffice address of
 is;
 that each of them is acquainted with
 of, in the County of
 and State of Indiana, who has made application for a certificate to au-
 thorize the issuance of a license to practice Midwifery in the State of
 Indiana, and that she is the person named in the accompanying applica-
 tion, and that she has been engaged in the active practice of Midwifery at
, in the County of
 State of Indiana, and at, County of
, State of Indiana, for the ten years last pre-
 ceding the passage of "An Act regulating the practice of Medicine, Sur-
 gery and Obstetrics," etc., approved March 8, 1897.

Signed in my presence, and sworn to before me, this day of
189..

NOTE.—This affidavit must be sworn to before a Notary Public or an officer authorized to administer oaths.

NOTE.—This application is to accompany Blank No. 4.

Form No. 5.

FREEHOLDER'S AFFIDAVIT AS TO MORAL CHARACTER.

(Affidavit to accompany application to the State Board of Medical Registration and Examination of the State of Indiana, for Certificate.)

The undersigned freeholders of the County of.....
in the State of Indiana, each being sworn, do depose and say they are
well acquainted with.....of.....
in the County of and State of Indiana, who
has made application for a Certificate to authorize the County Clerk to
issue h... a license to practice Medicine, Surgery and Obstetrics in the
State of Indiana; that he has not been guilty of felony or gross immorality
and is not addicted to the liquor or drug habit to such a degree as to render
.... unfit to practice Medicine, Surgery and Obstetrics; that
general reputation for moral character is good.

..... (Seal.)

..... (Seal.)

Signed in my presence, and sworn to before me, this day of
....., 189.

.....
.....

NOTE.—This affidavit must be sworn to before a Notary Public or some one authorized to administer oaths.

All the foregoing blanks were submitted to the Attorney-General for his opinion as to their legality and were by him approved.

The following rule was adopted:

Rule 2. That persons having lost their county license would be required to furnish a properly certified duplicate of the same from the Clerk of the county from which the original license was granted.

Rule 3. At its meeting May 14, the Board ruled, "that affidavits other than those specified by the law when such were required, would be accepted without regard to residence of affiants.

The following questions were submitted to the Attorney-General for his opinion, viz.:

Question. Should this Board refuse a certificate of qualification to an applicant presenting a license granted by the County Clerk under the Acts of 1885 and 1891 when it becomes known to the Board that such license was procured upon diploma obtained by theft, gift or purchase, and should this Board refuse a certificate for cause?

The Attorney-General answered:

"The State Board of Medical Registration and Examination is an administrative Board. To a certain extent it **must exercise** quasi-judicial power, but the **pure judicial function is not conferred** upon it, and can not be. That inheres alone to the courts.

"The Board may at its own risk refuse to issue the certificate when the applicant has presented a license under the acts of 1885 and 1891 on the ground that such licenses were issued in fraud of the State and of the public, and then defend the mandate that is brought on that ground. It might, however, be a usurpation of judicial functions and I could not recommend such a course unless it was clear beyond a possibility of peradventure that the objection really existed."

Rule 4. The Board ruled not to consider irregular forms of application, but to insist upon the use of the legally adopted forms referred to above.

The following question to the Attorney-General was submitted:

Question. "Inasmuch as the law defines the practice of medicine to be, 'To open an office for such purpose, or to announce to the public a readiness to practice medicine, surgery and obstetrics in any county in the State, or to prescribe for or to give surgical assistance to those suffering from disease, injury or deformity, should be to engage in the practice of medicine, etc.,' and as the law requires in case of change of residence from one county to another in the same State, that the holder of a license shall obtain a new license in the county where he proposes to reside by filing with the clerk the license obtained by him in the county where he last resided, when the clerk shall issue to him a new license, does it not follow that a legal practitioner can have but one professional residence or home, and that to open an office in a county, or to announce a readiness to practice in a county where he has no license, would be a violation of the law?"

The Attorney-General's answer was as follows:

"I think a licensed physician has a right to practice anywhere in the State. He can have but one residence at which he is required to take out a license, but I see no reason in the law why he could not maintain any number of offices if he feels so disposed. It is not where he maintains his office that he is required to take

out his license but where his residence is, and it might well be that a physician should prefer to live in one county and yet have his office in another."

The following order of business was adopted, viz.:

1. Call to order.
2. Roll call.
3. Reading of the minutes of previous meeting.
4. Report of committee.
 - (a) Standing.
 - (b) Special.
5. Communications from the Secretary.
6. Unfinished business.
7. Miscellaneous business.
8. New business.
9. Report of receipts and disbursements.

The following minimum requirements for colleges were adopted:

RESOLUTIONS PASSED BEARING UPON THE STAND- ING OF MEDICAL COLLEGES.

Indianapolis, Ind., July 14, 1897.

Resolved, That all medical colleges requiring a minimum of three years' study of medicine and two courses of lectures for graduation prior to 1886, and possessing proper facilities for teaching and a faculty embracing the chairs of Anatomy, Physiology, Chemistry, Materia Medica, Therapeutics, Medicine, Surgery and Obstetrics, shall be recognized as in good standing, and diplomas issued by the same and properly verified shall entitle the holders thereof to register as graduates in medicine under the laws of Indiana, providing that no certificate shall be issued to any applicant upon proof that his or her diploma has been obtained fraudulently or in violation of the published rules of the college issuing the same.

Resolved, That for the eleven years ending April 14, 1897, all medical colleges exacting the foregoing requirements and possessing facilities and a faculty, as specified in foregoing resolution, shall, by virtue of such facts, be recognized as in good standing to and including the year 1892, but that no medical college shall be

recognized as in good standing which has not, since 1892, possessed the foregoing facilities and faculty, and which has not, in addition, exacted an entrance qualification and attendance upon three regular courses of lectures as a condition of graduation.

Resolved, That on and after July 1, 1899, no medical college will be recognized as in good standing which does not require the entrance qualifications prescribed by the Association of American Medical Colleges as a prerequisite for matriculation, which does not possess an adequate equipment for teaching medicine, which has not clinical and hospital facilities, and which does not have an active and competent faculty embracing the Departments of Anatomy, Physiology, Chemistry, Materia Medica, Therapeutics, Medicine, Surgery, Obstetrics, Histology, Pathology, Bacteriology, Ophthalmology, Otology, Gynecology, Laryngology, Dermatology, Hygiene and State Medicine, and which does not enjoin attendance upon eighty per cent. of four regular courses of instruction, of not less than twenty-six weeks each, in four different years, and which does not exact an average grade of seventy-five per cent. on an examination as a condition of graduation.

J. C. WEBSTER, M. D.,

W. F. CURRYER, M. D.,

President.

Secretary.

At the meeting of the Board, May 19, 1897, the Attorney-General reported, by his deputy, Mr. Merrill Moores, the approval of the blanks procured by the Board for conducting their business.

In the afternoon of May 19, the Board having perfected its preliminary preparation and adopted blanks, forms, rules, etc., as above, proceeded to the consideration of application for certificate, and the following resolution was adopted:

Rule 5. Resolved, That in all cases in which the physician sends to the Board a license issued since the passage of the law, March 8, 1897, that such physician be instructed to send the license he possessed on or before March 8, 1897; or, in the event the license is lost or destroyed, he furnish a certified copy of the same; or, in the event he can furnish neither, he will be requested to send diploma and the required fee of \$6; and that this class be designated Class "A" for convenience of reference.

From May 19 to July 13, 1897, inclusive, there were twenty-five sessions held, during which the consideration of applications for certificates was the principal order of business.

June 9, 1897, Mr. Merrill Moores, Deputy Attorney-General, met with the Board, and, in response to questions, gave the following oral advice: "That the Board fix the time for the last date on county license to be recognized by this Board at March 8, 1897; that the Board has a right to go back of a license issued by a county clerk when it has evidence that the license was procured by fraud, and that it has the right and the power to require that all applicants for a certificate from the Board shall use the blanks and forms adopted by the Board."

On the evening of June 9 the Board began the consideration of application upon diplomas.

Rule 6. June 10 the Board ruled that all persons making complaints against applicants before the Board be required to be specific, giving full circumstances, dates, names and addresses of witnesses who can testify to particular allegations, and that affidavits be made to all charges forwarded to this office, or the Board can give the matter no consideration.

Rule 7. By a rule of the Board, adopted June 15, 1897, all applicants for license from border States were ordered held until reciprocal relations were established with those States.

June 29, 1897, the Attorney-General furnished to the Board his definition of a "good, moral character," as prescribed by the law, as follows:

State Board of Medical Registration and Examination, State House:

Gentlemen—In answer to your inquiry as to what constitutes a good moral character, in view of the duty imposed upon the Board to refuse a certificate to any person guilty of gross immorality, I have to say that to all intents and purposes a man's character and reputation are identical, because while the one depends upon himself and the other is what others think of him, for all practical purposes his character is the opinion which others have drawn from his actions.

Gross immorality may be defined as any serious breach of moral duty. Moral character is such character as is "in accord with, or controlled by, the rules of right conduct." If acts are charged against an applicant for a certificate, which, in the opinion of the Board, are not in accordance with the commonly accepted rules of right conduct, it is undoubtedly the duty of the Board to refuse a certificate, if it believes that the applicant has been guilty of the acts with which he is charged.

As to the question of what acts constitute gross immorality, it is impossible to give a full and clear definition, and each case must be left to the conscience of the Board.

The Board has prescribed a form of affidavit, to be made by two freeholders, as to the character of applicants. This affidavit, when made, is by no means controlling, as, if specific charges are made against any applicant, it is the duty of the Board to investigate them, and, upon investigation it must refuse license if the charges are sustained, notwithstanding the fact that a false affidavit has been filed.

I have the honor to be

Yours very truly,

W. A. KETCHAM,
Attorney-General.

June 30, 1897, the following interrogatory was sent to the Clerk of Marion County, by order of the Board:

Dear Sir—Will you kindly examine your records and inform the State Board of Medical Registration and Examination whether you recognize any and all diplomas presented to you.

The Clerk replied as follows:

“Yes; I issue license on any diploma presented, when the proper affidavit is made. Under the law I have no discretion.”

July 29th, 1897, the following resolution was adopted, viz.:

Resolved, That the diplomas of the following named medical colleges be not recognized by this Board, said colleges not having complied with minimum required of this Board:

LIST OF NON-RECOGNIZED MEDICAL COLLEGES.

- National Medical College, Chicago.
- Hygeia Medical College of Cincinnati, Ohio.
- Illinois Health University, Chicago, Illinois.
- Dutton Medical College, of Chicago, Illinois.
- Independent Medical College, of Chicago, Illinois.
- College of Medicine and Surgery, Indianapolis, Indiana.
- Indiana College of Medicine and Midwifery, Indianapolis, Indiana.
- Curtis Physio-Medical College, Cincinnati.
- Wisconsin Eclectic Medical College, of Milwaukee, Wisconsin.
- American Eclectic Medical College, of Cincinnati, Ohio.
- American Health College, of Cincinnati, Ohio.
- Joplin Medical College, Joplin, Missouri.

August 3, 1897, the following resolution was adopted, viz.:

Resolved, That licenses granted upon diplomas issued by the Curtis Physio-Medical Institute, of Marion, Indiana, and The American Medical College or University of Medicine, Indianapolis, Ind., if issued prior to March 8, 1897, and if it appears that the same were not procured by fraud, be recognized by this Board as valid, and that certificates be granted to the lawful holders thereof, whose applications have been received by this Board on or before the 13th day of July, 1897; and,

Resolved, That applicants for certificates upon diplomas issued by the above named colleges be required to pass a supplemental examination by this Board before certificates will be issued.

The Secretary made the following report to the Board, August 4, 1897: Amount of money received up to, and including, this date, and turned over to the Treasurer, \$6,467.28 (six thousand four hundred and sixty-seven dollars and twenty-eight cents).

Rule 8. It was ruled by the Board that when charges are made against an applicant, he must be notified that an affidavit has been filed against him, and giving him a synopsis of the same and asking the accused to make a written reply, if they so desire, making affidavit to the same and having the same on file at the time designated by the Board for hearing.

Rule 9. August 25. It was ruled by the Board that all sworn evidence submitted to the Board in defense of an application be filed with the papers of the applicant for future reference and held as the property of the Board.

August 31, 1897, the following resolution was adopted, viz.:

Resolved, That the Indiana State Board of Medical Registration and Examination could not recommend that credit be given students for time spent in any medical college which is not recognized by this Board, except such students as have a certificate of qualification from the Board, obtained upon examination by the Board. (See amendment, October 13, 1897.)

September 26, 1897, the following rule was adopted to govern the examinations held by the Board:

Rule 10. That each member of the Board be instructed to prepare a sufficient number of questions—ten questions to each subject—each subject bearing appropriate heading and written in type, numbered and signed at the upper right-hand corner by the

members, for use in examination of applicants. Questions to be submitted to the approval of the Board, and that the order of examinations be taken as follows:

1. Anatomy.
2. Physiology.
3. Chemistry.
4. Surgery.
5. Theory and Practice.
6. Materia Medica and Therapeutics.
7. Obstetrics.
8. Gynecology.

At the same session the following rule was adopted, viz.:

Rule 11. That all candidates must make a general average of 75 per cent. in order to secure certificates of qualification. The subjects upon which examinations are required by law were assigned to the various members of the Board as follows:

Anatomy and Physiology, Materia Medica and Therapeutics, and Theory and Practice to Dr. Spurgeon.

Chemistry and Surgery to Dr. Dinnen.

Gynæcology, Materia Medica and Therapeutics, and Theory and Practice to Dr. Curryer.

Theory and Practice, and Materia Medica and Therapeutics to Dr. Webster.

Obstetrics, Materia Medica and Therapeutics, and Theory and Practice to Dr. Gott.

It was directed by the Board that the following letter of information be sent to all persons making complaint:

LETTER.

It will be necessary that specific charges be made in order that this Board may be able to take effective action. Gross immorality, habitual drunkenness, the drug habit, obtaining certificate or license by fraud or misrepresentation, are reasons contemplated in the law and necessary to revoke, or refusal to grant license.

October 13, 1897, the following resolution was adopted, viz.:

Resolved, That students who had, before the adoption of the minimum requirements of this Board, July 14, 1897, attended full courses of instruction in nonrecognized medical colleges may be admitted to advanced standing in recognized medical colleges on complying with the entrance requirements of said recognized medical colleges, and passing other examinations in all branches in the previous years of study.

The following letter also was addressed to the Attorney-General at the same meeting:

Hon. W. A. Ketcham, Attorney-General, Indianapolis, Ind.:

Dear Sir—The State Board of Medical Registration and Examination, in the prosecution of its duties, arrives at the conclusion that the following named persons within the State did, on, or about, the dates indicated, make oath before the County Clerks of their respective counties, that they were graduates of reputable medical colleges; that these persons did so, knowing that the statements to which they made oath were false; that the colleges in question were notoriously bad, and that they had themselves purchased diplomas from these colleges, and that they did not attend said institutions for full college years, nor were they required to attend in order to obtain diplomas. The persons named in this communication have made false statements under oath within the last two years.

Accompanying this communication is a summary of the evidence that may be useful in dealing with the parties. The prosecuting attorneys in the different counties will, no doubt, at your request, give the case their immediate attention.

Respectfully,

W. F. CURRYER.

Rule 12. The following was adopted as a rule of the Board: That in cases where the applicant makes claim that his diploma has been lost in any way, that such applicant be required to furnish satisfactory evidence of his graduation by procuring and presenting to the Board a certificate from the Secretary of the medical college from which he obtained his degree, certifying to the fact of his graduation, giving date of the same and bearing the seal of the college.

December 31, 1897, the Secretary made the following financial report of money received from all sources for the year 1897:

REPORT OF RECEIPTS AND EXPENSES TO JANUARY 1, 1898.

RECEIPTS.

Fees from applications upon license.....	\$4,397 25	
Fees from applications upon diplomas.....	3,120 00	
Fees from applications upon examinations	200 00	
Fees from applications upon obstetrics	57 00	
Fees from embellished certificates	456 00	
		<hr/>
Total receipts		\$8,230 25

EXPENDITURES.

J. C. Webster, per diem	\$730 00	
J. C. Webster, expenses	193 65	
W. T. Gott, per diem	690 00	
W. T. Gott, expenses	154 35	
W. F. Curryer, per diem	800 00	
W. F. Curryer, expenses	46 90	
Jas. M. Dinnen, per diem	720 00	
Jas. M. Dinnen, expenses	375 46	
W. A. Spurgeon, per diem	770 00	
W. A. Spurgeon, expenses	225 75	
D. F. Urbahns, Clerk of Board	424 40	
Clerical assistance	281 80	
W. B. Burford, stationery	512 57	
Central Union Telephone Company	26 09	
Miscellaneous	69 20	
Office expenses, stamps, express, telephone, etc.....	286 00	
Money refunded, applications rejected, etc.....	197 00	
		<hr/>
Total expenses		\$6,503 17
		<hr/>
Balance on hand		\$1,727 08

Respectfully submitted,

W. F. CURRYER,
Secretary.

HOW TO OBTAIN A LICENSE TO PRACTICE MEDICINE IN INDIANA.

At a special meeting of the Board of Medical Registration and Examination, in June, the Secretary advised the issuing of a circular of information as follows:

The applicant must be a *bona fide* resident of the county and State.

Procure the necessary blanks from the County Clerk, fill them out carefully and make affidavit to the same before some officer legally authorized to administer oaths; also have two freeholders, residents of the county, make affidavit as to the moral character and to the personal identity of the applicant as the person mentioned in the diploma. The application blanks, diploma and six dollars must be sent by express to the State Board of Medical Registration and Examination, Room 120, State House, Indianapolis, Ind.

Those who desire to apply for license to practice obstetrics must follow the same directions as above, but the fee is only three dollars.

The State Board of Medical Registration and Examination, at its next meeting, after the filing of the papers, will examine the same, and, if satisfactory, will issue its certificate.

Upon the receipt of the certificate by the applicant he shall, upon the presentation of it to the Clerk of the county in which he resides, receive a license to practice medicine, surgery and obstetrics within the State of Indiana. The recipient of such license shall pay to the County Clerk fifty cents as his fee for issuing and recording the same.

In case of change of residence from one county to another within this State, the holder of a physician's license shall obtain a new license in the county where he proposes to reside by filing with the County Clerk the license obtained by him in the county in which he last resided, and the Clerk shall issue to him a new license.

No person is qualified to practice medicine, surgery or obstetrics within the State of Indiana who has not first procured a license so to do under the act of 1897.

All persons who desire to take an examination before the Board are required to apply to the Clerk of the Board, who will furnish a blank form of application and also furnish an affidavit blank as

to moral character. This, properly filled and accompanied with the fee of \$25.00, must be on file at least five days before the quarterly meeting fixed by law.

Examination for obstetric license is the same as the above, except the fee is \$3.00.

The following is for the further information of those who desire to begin the practice of medicine, surgery or obstetrics in any of their branches in the State of Indiana:

1. The only legal right to engage in such practice is a license from the County Clerk issued upon a certificate from this Board. An application on file, though in due form, by one having graduated from a college in good standing, confers no legal right to practice. A permit from a Board of Pharmacy to sell proprietary medicines confers no right to assume any of the duties of a physician.

2. The Board now issues three kinds of certificates:

- (a) Upon a diploma from a medical college recognized by the Board as "in good standing" at the session immediately preceding the issuance of such diploma.
- (b) A certificate to practice midwifery upon presentation of a diploma from a school of midwifery which is recognized by this Board, or upon the applicant passing a satisfactory written examination in midwifery;
- (c) And upon examination before the Board in all the branches of medicine, surgery and obstetrics.

The Board in no case issues certificates to practice a specialty.

3. Proper blanks for applying for either certificate will be issued only upon application to the Clerk of the county in which the applicant resides.

4. Certificates, whether upon diploma, or examination, will be issued by the Board only when in actual session, the Secretary having no authority to issue certificates in the interim of the meetings.

5. The diploma, with proper affidavits, and the fee, must always accompany the application and be sent by express, prepaid, or by registered letter. The application must, in all cases, give the actual residence of the applicant, as certificates are given only to residents in the county in which they reside. After the Board has examined the diploma the Secretary will return it at once by express, C. O. D., and the certificate, if granted, will be furnished.

6. The meetings of the Board are held quarterly, on the second Tuesday of January, April, July and October, unless otherwise ordered.

7. The fees for certificates are as follows:

- (a) Upon presentation of diploma from a school recognized by this Board, \$6.00.
- (b) A certificate to practice midwifery upon presentation of diploma from a school of midwifery recognized by this Board, or upon an examination in midwifery, \$3.00.
- (c) A certificate to those presenting diplomas from medical colleges not recognized by this Board will be issued if the applicant passes such examination as is required by this Board, and pays a fee of \$25.00.

8. The examinations in all branches of medicine, surgery and obstetrics are practical in character. Questions will be asked upon each branch, the answers to which must be written. The Board will require a general average of 75 per cent. on a scale of 100.

9. "To open an office for such purpose, or to announce to the public in any way a readiness to practice medicine in any county of the State, or to prescribe for, or to give surgical assistance to, those suffering from disease, injury or deformity, shall be to engage in the practice of medicine within the meaning of this act." (Sec. 8, Act of March 8, 1897.)

The State Board of Medical Registration and Examination will construe this law to mean that no person can, under any circumstances, prescribe for or furnish medicine to those suffering from disease, injury or deformity, except in unquestioned emergency, and the Board will especially enforce this rule in cases of "counter prescribing" by druggists, and against all who in any way assume the rights and functions of a physician.

10. Certificates upon diploma or upon examination issued by other State Boards do not entitle the holder to like certificates in this State, except upon conditions recognized by the Indiana law.

11. In seeking information relative to the standing of any particular college, give the correct name of the college, its location, and the particular session for which the information is desired. In no case will the standing of a college be given until determined by the Board.

**MEDICAL COLLEGES RECOGNIZED BY THE INDIANA
STATE BOARD OF MEDICAL REGISTRATION
AND EXAMINATION.***

American Medical College, St. Louis, Missouri.
Baltimore Medical College, Baltimore, Maryland.
Barnes Medical College, St. Louis, Missouri.
Bellevue Hospital Medical College, New York, New York.
Bennett Medical College, Chicago, Illinois.
Boston University School of Medicine, Boston, Massachusetts.
Central College of Physicians and Surgeons, Indianapolis, Indiana.
Charity Hospital Medical College, Cleveland, Ohio.
Chicago Homeopathic Medical College, Chicago, Illinois.
Chicago Medical College, Chicago, Illinois.
Chicago Physio-Medical College, Chicago, Illinois.
Cleveland University of Medicine and Surgery, Cleveland, Ohio.
College of Physicians and Surgeons, Chicago, Illinois.
College of Physicians and Surgeons, Keokuk, Iowa.
College of Physicians and Surgeons, Baltimore, Maryland.
College of Medicine and Surgery, Cincinnati, Ohio.
College of Physicians and Surgeons, New York, New York.
College of Physicians and Surgeons, St. Louis, Missouri.
Columbian University, Medical College, Washington, D. C.
Columbus Medical College, Columbus, Ohio. (Merged into
Starling Medical College.)
Detroit Medical College, Detroit, Michigan.
Eclectic College of Physicians and Surgeons, Indianapolis,
Indiana.
Eclectic Medical Institute, Cincinnati, Ohio.

*This list of medical colleges includes only those whose diplomas have been presented to the State Board of Medical Registration and Examination for a certificate to practice in the State of Indiana.

Eclectic Medical College, Philadelphia, Pennsylvania. (Not recognized after 1870.)

Ensworth Medical College, St. Joseph, Missouri.

Evansville Medical College, Evansville, Ind.

Fort Wayne College of Medicine, Fort Wayne, Indiana.

Gross Medical College, Denver, Colorado.

Hahnemann Medical College, Chicago, Illinois.

Hahnemann Medical College, Philadelphia, Pennsylvania.

Harvey Medical College, Chicago, Illinois.

Herring Medical College, Chicago, Illinois.

Homeopathic Hospital College, Cleveland, Ohio.

Homeopathic Medical College, Philadelphia, Pennsylvania.

Hospital College of Medicine, Louisville, Kentucky.

Hospital Medical College, Evansville, Indiana.

Howard University Medical College, Washington, D. C.

Illinois Medical College, Chicago, Illinois.

* Jefferson Medical College, Philadelphia, Pennsylvania.

Kentucky School of Medicine, Louisville, Kentucky.

Keokuk Medical College, Keokuk, Iowa.

Louisville Medical College, Louisville, Kentucky.

Louisville National Medical College, Louisville, Kentucky.

Long Island College Hospital, Brooklyn, New York.

Marion Sims Medical College, St. Louis, Missouri.

Medical College of Indiana, Indianapolis, Indiana.

Medical College of Ohio, Cincinnati, Ohio.

Medico-Chirurgical College of Philadelphia, Pennsylvania.

Miami Medical College, Cincinnati, Ohio.

Missouri Medical College, St. Louis, Missouri.

McGill University, Medical Department, Montreal, Canada.

Meharry Medical College, Nashville, Tennessee.

Medical College of Cleveland, Ohio.

Michigan College of Medicine and Surgery, Detroit, Michigan.

New York Homeopathic Medical College, New York, New York.

Northwestern University Woman's College, Chicago, Illinois.

Physio-Medical Institute, Cincinnati, Ohio.

Physio-Medical College of Indiana, Indianapolis, Indiana.

Pennsylvania Medical College, Philadelphia, Pennsylvania.

Pulte Medical College, Cincinnati, Ohio.

Queens University of Kingston, Ontario.

* *Indiana Eclectic Medical College, Indianapolis*

Rush Medical College, Chicago, Illinois.

Starling Medical College, Columbus, Ohio.

St. Louis College of Physicians and Surgeons, St. Louis, Missouri.

Southwestern Homeopathic Medical College, Louisville, Kentucky.

Southern Medical College, Atlanta, Georgia.

State University of Iowa, Medical Department, Iowa City, Iowa.

Tennessee Medical College, Knoxville, Tennessee.

Toledo Medical College, Toledo, Ohio.

Trinity Medical College, Toronto, Ontario.

University of Michigan, Medical Department, Ann Arbor, Michigan.

University of the City of New York, Medical Department, New York, New York.

University of Louisville, Louisville, Kentucky.

University of Pennsylvania, Department of Medicine, Philadelphia, Pennsylvania.

University of Illinois (College of Physicians and Surgeons), Chicago, Illinois.

University of Nashville, Medical Department, Nashville, Tennessee.

University of Georgetown, Medical Department, Washington, D. C.

University of Wooster, Medical Department, Cleveland, Ohio.

University of Vermont, Burlington, Vermont.

University of Minnesota, Minneapolis, Minnesota.

Western Reserve University, Cleveland, Ohio.

Woman's Medical College of Pennsylvania, Philadelphia, Pennsylvania.

Woman's Hospital Medical College, Chicago, Illinois.

Western Pennsylvania Medical College, Pittsburgh, Pennsylvania.

OFFICIAL REGISTER PHYSICIANS.

ABBREVIATIONS—R, for regular; E, for eclectic; H, for homeopathic; PM, for physio-medical; NC, for not classed; HT, for hygeia therapeutic; B, for botanic; * shows that certificate has been issued but had not been presented to County Clerk for license to January 1, 1898.

The following list includes all certificates issued to May 1, 1898:

Adams County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Asby, H. M.	Geneva	R.	7-20-97	Kantz, Christens	Berne	B.	7-30-97
Beavers, Seth D.	Decatur	R.	7-14-97	McDowell, Jacob	Geneva	E.	7-20-97
Black, W. C.	Geneva	R.	7-28-97	McKeman, R. B.	Monroe	R.	8-17-97
Boyer, J. S.	Decatur	R.	7-14-97	McMillen, W. W. P.	Decatur	R.	7-15-97
Brayton, W. R.	Geneva	R.	9-14-97	Mattox, L. L.	Geneva	R.	7-30-97
Caswell, G. G.	Steele	H.	7-19-97	Miller, J. M.	Decatur	R.	10-4-97
Clark, D. D.	Decatur	R.	7-14-97	Newcomer, F. T.	Preble	E.	11-20-97
Clark, C. S.	Decatur	E.	7-14-97	Parrish, M. F.	Monroe	R.	7-16-97
Costello, H. F.	Decatur	R.	7-20-97	Reusser, Amos	Berne	H.	7-9-97
Coverdale, J. S.	Decatur	R.	7-19-97	Schenk, Fred'k.	Berne	PM	8-13-97
Ford, Adam C.	Geneva	E.	7-19-97	Schenk, C. H.	Berne	PM	7-27-97
Franz, Ernest	Berne	H.	7-19-97	Stoneburner, J. H.	Berne	E.	7-15-97
Gaige, Elmer M.	Magley	E.	7-6-97	Summers, W. H.	Decatur	E.	7-17-97
Harper, J. L.	Pleasant Mills	E.	7-24-97	Thomas, P. B.	Decatur	R.	7-9-97
Holloway, M. L.	Decatur	R.	7-15-97	Vizard, J. W.	Pleasant Mills	R.	7-20-97
Holloway, A. G.	Decatur	R.	7-14-97	Ward, Jas. B.	Geneva	R.	7-20-97
Keller, H. E.	Decatur	PM	7-22-97				

Regular, 19; Eclectic, 8; Homeopathic, 3; Physio-Medical, 3. Total, 33.

Allen County.

Adams, Horace E.	Maysville	R.	7-16-97	Ferguson, Wm. G.	Ft. Wayne	R.	*
Banning, E. P.	Ft. Wayne	H.	9-3-97	Ferguson, Wm. T.	Ft. Wayne	R.	*
Banning, C. B. C.	Ft. Wayne	H.	*	Fonner, Geo. M.	Hoagland	E.	7-9-97
Barnett, Chas. E.	Ft. Wayne	R.	9-23-97	Gard, Bloomfield	Ft. Wayne	E.	7-15-97
Barnett, W. W.	Ft. Wayne	R.	7-9-97	Gavin, Frank J.	Ft. Wayne	R.	7-14-97
Bergk, Chas.	Ft. Wayne	R.	7-21-97	Gilbert, Carl J.	New Haven	H.	7-22-97
Betts, A. P.	Woodburn	R.	9-9-97	Green, Frances M.	Ft. Wayne	H.	7-15-97
Bickell, Jno. E.	Ft. Wayne	R.	9-23-97	Greenwalt, M.	Ft. Wayne	R.	7-16-97
Bickelback, J. W.	New Haven	R.	8-11-97	Greenwalt, G. L.	Ft. Wayne	R.	8-18-97
Block, C. F.	Ft. Wayne	B.	9-28-97	Greenwell, F.	Huntertown	R.	7-16-97
Bolling, L. A.	Ft. Wayne	R.	7-9-97	Gross, W. O.	Ft. Wayne	R.	7-15-97
Boswell, A. J.	Ft. Wayne	R.	7-16-97	Harris, A. H.	Ft. Wayne	R.	7-17-97
Bowen, G. W.	Ft. Wayne	H.	7-16-97	Harrod, Morse	Ft. Wayne	E.	8-4-97
Bowers, G. B. M.	Ft. Wayne	R.	*	Havice, S. H.	Ft. Wayne	R.	7-14-97
Brudi, G. A.	New Haven	R.	7-20-97	Heaten, C. E.	Ft. Wayne	R.	9-20-97
Bulson, A. E.	Ft. Wayne	R.	9-3-97	He rick, Jacob	Ft. Wayne	R.	8-10-97
Burchman, A. T.	Ft. Wayne	R.	*	Hickman, T. L.	Ft. Wayne	PM	7-22-97
Buxton, A. J.	Ft. Wayne	R.	*	Houghton, Lloyd	Huntertown	R.	7-19-97
Calvin, W. D.	Ft. Wayne	R.	9-28-97	Howe, Delia E.	Ft. Wayne	R.	11-3-97
Calvin, Jessie C.	Ft. Wayne	R.	9-28-97	Jackson, P. W.	Ft. Wayne	E.	8-6-97
Chambers, J. D.	Ft. Wayne	R.	*	Jones, J. H.	Ft. Wayne	E.	7-15-97
Clark, Battle	New Haven	R.	7-21-97	Julian, E. T.	Maysville	R.	7-27-97
Coblentz, J. W.	Ft. Wayne	R.	7-30-97	Kappel, J. H.	Ft. Wayne	R.	7-15-97
Connolly, W. A.	Monroeville	R.	9-18-97	Kaufman, D. E.	Monroeville	R.	10-29-97
Cosgrove, F. K.	Harlan	R.	7-17-97	Kesler, A. J.	Ft. Wayne	R.	7-15-97
Crull, Eric A.	Ft. Wayne	R.	6-25-97	Kryder, J. L.	Cedarville	R.	7-17-97
Cutshaw	Arcola	R.	7-21-97	Ladd, E. B.	Ft. Wayne	R.	7-21-97
DeLaRuhl, Wm.	Ft. Wayne	R.	7-15-97	LaFollette	Poe	E.	*
Deming, N. L.	Ft. Wayne	R.	8-18-97	Leedy, C. V.	Ft. Wayne	R.	8-9-97
Deppeler, R. P.	Ft. Wayne	R.	8-11-97	Lipes, R. P.	Ft. Wayne	R.	*
Derbyshire, S. J.	Ft. Wayne	R.	*	Lipes, U. G.	Ft. Wayne	R.	8-28-97
Derbyshire, Lou	Ft. Wayne	R.	10-22-97	Lomas, James A.	Ft. Wayne	R.	*
Devaux, E. F.	Ft. Wayne	E.	12-1-97	McBride, Jas. L.	Zanesville	R.	7-14-97
Dinnen, Jas. M.	Ft. Wayne	R.	7-9-97	McCaiky, G. W.	Ft. Wayne	R.	*
Drayer, L. P.	Ft. Wayne	R.	7-15-97	McCauley, J. W.	Ft. Wayne	R.	7-17-97
Duemling, H. A.	Ft. Wayne	R.	10-5-97	McClure, Wm. H.	Ft. Wayne	R.	10-28-97
Edwards, L. H.	Monroeville	R.	*-28-97	McComb, Wm. S.	Sheldon	R.	9-29-97
English, Calvin H.	Ft. Wayne	R.	8-31-97	McCormick, T. H.	Ft. Wayne	R.	7-23-97
Ensign, Wm. McC	Ft. Wayne	R.	7-16-97	McEvoy, J. B.	Ft. Wayne	R.	7-20-97
Fair, C. S.	Ft. Wayne	R.	8-17-97	McGoogan, G. B.	Arcola	R.	7-2-97

Allen County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
McHugh, Jas. E.	Ft. Wayne	R.	8-2-97	Shutt, John M.	Ft. Wayne	E.	8-20-97
McOscar, E. J.	Ft. Wayne	R.	"	Shutt, L. C.	Sheldon	E.	7-22-97
Martz, C.	Ft. Wayne	H.	7-20-97	Siver, E. L.	Ft. Wayne	R.	7-19-97
Mentzer, S. E.	Monroeville	R.	8-5-97	Skilling, Jno.	Ft. Wayne	R.	"
Mers, H. G.	Ft. Wayne	H.	7-16-97	Sledd, S. D.	Ft. Wayne	R.	8-2-97
Mikesell, A. L.	Ft. Wayne	H.	7-26-97	Smith, J. L.	Hoagland	E.	7-16-97
Miller, J. E.	Ft. Wayne	R.	7-15-97	Smith, E. D.	Ft. Wayne	R.	8-6-97
Morgan, E. E.	Ft. Wayne	R.	7-14-97	Smith, Nelson B.	Ft. Wayne	R.	7-16-97
Morgan, Jos. D.	Dixon	E.	9-22-97	Smith, C. S.	Ft. Wayne	R.	"
Murphy, Geo.	Leo	R.	10-4-97	Steman, C. B.	Ft. Wayne	R.	7-30-97
Myers, I. M.	Maples	R.	7-16-97	Steman, Geo. C.	Ft. Wayne	R.	"
Myers, Wm. H.	Ft. Wayne	R.	10-20-97	Steman, Harri' F.	Ft. Wayne	R.	7-31-97
Nieschang, C. F.	Ft. Wayne	R.	7-15-97	Stemen, Geo. B.	Ft. Wayne	R.	7-16-97
Nichols, John	Ft. Wayne	R.	"	Stockdale, B. A.	Ft. Wayne	R.	"
Niswonger, H. W.	Ft. Wayne	R.	"	Stults, Jos. E.	Ft. Wayne	R.	7-15-97
Null, L. S.	New Haven	E.	7-16-97	Stultz, C. E.	Ft. Wayne	R.	7-15-97
Ogle, Jno. J.	Ft. Wayne	E.	7-22-97	Stultz, Jno. A.	Ft. Wayne	H.	7-20-97
Omo, Jos. H.	Harlan	R.	8-27-97	Sturgis, L. T.	Ft. Wayne	R.	7-17-97
Porter, Miles F.	Ft. Wayne	R.	8-31-97	Swearingen, H. V.	Ft. Wayne	NC.	"
Proogler, Carl	Ft. Wayne	R.	7-15-97	Swift, C. F.	Maysville	NC.	"
Ranch, A. J.	Ft. Wayne	R.	7-27-97	Tinkham, M. W.	Nine Mile	R.	7-17-97
Ranke, J. W. H.	Ft. Wayne	R.	7-21-97	VanBuskirk, A. E.	Ft. Wayne	R.	"
Robinson, A. J.	Ft. Wayne	R.	12-7-97	VanSwearingen, B.	Ft. Wayne	R.	6-24-97
Rosenthal, I. M.	Ft. Wayne	R.	7-27-97	Wagner, E. F.	Ft. Wayne	R.	9-29-97
Rosenthal, M. I.	Ft. Wayne	R.	9-6-97	Wallace, J. C.	Ft. Wayne	R.	"
Ross, Geo. A.	Ft. Wayne	H.	7-16-97	Wenger, N. R.	Ft. Wayne	R.	7-23-97
Samm, Elizabeth S.	Ft. Wayne	E.	"	Wheelock, K. K.	Ft. Wayne	R.	7-16-97
Schilling, Carl	Ft. Wayne	R.	7-28-97	Whery, Wm. P.	Ft. Wayne	R.	7-20-97
Schilling, John	Ft. Wayne	R.	9-27-97	Whery, Mary A.	Ft. Wayne	R.	7-17-97
Schneider, A. L.	Ft. Wayne	R.	"	Wilson, Alva	Hoagland	E.	7-3-97
Schrader, W. F.	Ft. Wayne	R.	7-31-97	Younge, Jno. W.	Ft. Wayne	R.	8-7-97
Schulz, A. F.	Ft. Wayne	H.	10-21-97				

Regular, 116; Eclectic, 14; Homeopathic, 10; Physio-Medical, 1; not classed, 2. Total, 143.

Bartholomew County.

Arnold, J. W.	Columbus	R.	7-31-97	Kent, C. V.	Hope	R.	11-24-97
Arwine, Jno. S.	Washington	R.	7-26-97	Kincaid, S. F.	Taylorville	E.	7-17-97
Arwine, James T.	Washington	R.	7-26-97	Kirkpatrick, A. M.	Columbus	R.	10-15-97
Arwine, Lotta R.	Washington	R.	7-19-97	Lawrence, Wm. M.	Jamesville	R.	7-31-97
Banker, W. T.	Columbus	R.	"	McCoy, Geo. T.	Columbus	R.	7-15-97
Banker, A. J.	Columbus	R.	7-15-97	McLeod, A. J.	Columbus	R.	7-31-97
Banks, Wm. H.	Wynansville	R.	7-29-97	Mennet, O. H.	Columbus	R.	10-29-97
Beck, F. J.	Hartsville	R.	7-19-97	Morrison, J. H.	Hartsville	R.	9-4-97
Beck, Wm. H.	Hartsville	R.	7-19-97	Moses, F. W.	So. Bethany	E.	12-2-97
Biddinger, S. W.	Waynesburg	E.	8-10-97	Norton, F. D.	Petersville	R.	8-29-97
Butler, W. H.	Columbus	R.	7-19-97	Pettigrew, C. D.	Columbus	R.	7-16-97
Charmichael, W. T.	Walesboro	PM	"	Rains, G. W.	Jonesville	R.	7-16-97
Clark, I. S.	Columbus	R.	7-14-97	Reed, L. D.	Hope	R.	8-11-97
Coffen, Wm.	Newton	R.	10-9-97	Regannas, E. G.	Hope	NC	"
Cohen, Wm. H.	Burnsville	R.	"	Reynolds, S. H.	Columbus	R.	7-15-97
Cosby, G. O.	Burnsville	R.	8-24-97	Reynolds, Geo. E.	Elizabethtown	R.	8-13-97
Curtis, Geo. L.	Columbus	R.	7-15-97	Rice, Alfred	Columbus	H.	12-30-97
David, Jos. H.	Azalia	R.	7-15-97	Richards, F. B.	Taylorville	R.	7-17-97
DeLong, O. A.	Azalia	PM	7-19-97	Roland, W. C.	Columbus	R.	7-19-97
Edwards, J. J.	Walesboro	PM	11-17-97	Roope, A. P.	Columbus	R.	7-23-97
Elrod, Moses N.	Columbus	R.	7-19-97	Shane, Thos. A.	Columbus	H.	7-19-97
Fitzpatrick, B.	Hope	R.	7-30-97	Smalley, Jno. K.	Hartsville	R.	11-18-97
Francis, E. T.	Columbus	R.	7-27-97	Smith, Nelson G.	Columbus	E.	8-10-97
Fugate, Wm. I.	St. Louis Cr'g.	R.	7-31-97	Stapp, Simeon	Hope	R.	7-15-97
Hauer, Zack H.	Columbus	R.	7-20-97	Thompson, D. A.	Elizabethtown	R.	8-9-97
Hawley, K. D.	Columbus	R.	"	Voris, S. M.	Columbus	R.	12-21-97
Holder, R. E.	Columbus	R.	7-24-97	Wells, Jesse	Columbus	R.	"
Hudson, Jas. B.	Columbus	E.	11-19-97	Wisner, W. E.	Columbus	R.	8-7-97
Irvine, W. T.	Jonesville	R.	"	Wright, J. F.	Columbus	R.	"

Regular, 47; Eclectic, 5; Homeopathic, 2; Physio-Medical, 3; not classed, 1. Total, 58.

Benton County.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Bloom, H. G.	Oxford	R.	9-8-97	Lee, Rob't E.	Boswell	R.	*
Boice, A. C.	Fowler	R.	8-16-97	Leaming, Lewis	Otterbein	R.	7-10-97
Brier, E. C.	Earl Park	R.	*	Mavity, D. E.	Fowler	R.	7-15-97
Christley, I. B.	Boswell	R.	8-24-97	Mavity, J. S.	Fowler	R.	7-15-97
Cook, Clark	Fowler	R.	7-1-97	McConnell, H. C.	Oxford	NC	7-24-97
Crume, Geo. P.	Earl Park	R.	8-4-97	Roberts, Sam'l R.	Oxford	R.	7-27-97
Fall, C. W.	Oxford	R.	7-22-97	Simpkins, J. C.	Boswell	R.	*
Fenton, Sam'l C.	Boswell	R.	*	Smith, W. A.	Otterbein	R.	7-21-97
Flack, O. M.	Ambia	R.	7-15-97	Spooner, H. M.	Fowler	H	7-30-97
Green, Nellie E.	Fowler	R.	8-16-97	Thompson, T. J.	Otterbein	R.	8-24-97
Heinen, Jas. P.		R.	*	Watson, A. A.	Earl Park	R.	9-10-97
Hoag, Jas. H.	Oxford	H.	12-10-97	Williams, W. H.	Fowler	R.	10-25-97
Hunter, A. F.	Raub	E.	10-4-97				

Regular, 21; Eclectic, 1; Homeopathic, 2; not classed, 1. Total, 25.

Blackford County.

Bell, C. L.	Hartford City	R.	8-5-97	Landon, L. C.	Priam	R.	8-2-97
Caldwell, D. C.	Hartford City	R.	*	McFarland, Jno. E.	Mill Grove	E.	7-15-97
Clapper, M. M.	Hartford City	R.	7-31-97	Mason, C. R.	Hartford City	R.	7-14-97
Clauser, N. D.	Hartford City	R.	*	Morrison, Jno. A.	Montpelier	R.	12-18-97
Corey, Chas. W.	Hartford City	R.	7-26-97	Mulvey, Chas. B.	Montpelier	R.	7-28-97
Cronin, Wm. N.	Hartford City	R.	8-5-97	Oday, Jno. C.	Montpelier	R.	7-29-97
Davison, Henry C.	Hartford City	R.	7-14-97	Reed, H. B.	Mollie	PM	8-5-97
Drayer, Peter	Hartford City	R.	7-14-97	Reynolds, F. M.	Montpelier	R.	8-16-97
Elder, Chas. E.	Montpelier	R.	8-19-97	Robeson, Wm. C.	Montpelier	R.	7-29-97
Goodin, Sam'l A.	Montpelier	R.	8-31-97	Sage, Jno. W.	Hartford City	E.	7-20-97
Harden, Alfred	Hartford C'y	PM	7-14-97	Seller, Jno.	Montpelier	R.	7-28-97
Harden, Mrs. O. A.	Hartford C'y	PM	7-30-97	Scott, W. L.	Hartford C'y	PM	9-4-97
Harrold, Jno. R.	Roll	R.	7-23-97	Van Nuy, D. H.	Hartford City	R.	7-19-97
Houseman, Kate	Hartford City	E.	11-15-97	Wheeler, Wm. H.	Hartford City	H.	8-30-97
Hunt, H. C.	Montpelier	E.	7-17-97	White, L. E.	Montpelier	E.	7-19-97
Hunt, Thomas M.	Mill Grove	E.	10-14-97	White, R. B.	Montpelier	E.	7-19-97

Regular, 20; Eclectic, 7; Homeopathic, 1; Physio-Medical, 4. Total, 32.

Boone County.

Alford, Jas. S.	Zionsville	R.	8-23-97	Jorden, Thos. W.	Whitestown	R.	7-16-97
Armstrong, C. R.	Thorntown	H.	10-7-97	Kane, Jno. M.	Rosston	R.	7-14-97
Austin, F. H.	Jamestown	E.	8-12-97	Lee, D. F.	Boonville	R.	11-11-97
Ball, J. S. R.	Lebanon	R.	7-14-97	Little, P. G.	Elizaville	R.	7-26-97
Banta, Samuel J.	Lebanon	R.	9-8-97	McGee, J. A.	Big Springs	PM	7-16-97
Batman, Wm. F.	Lebanon	R.	7-15-97	McNutt, W. Y.	Zionsville	R.	12-29-97
Baugh, Wm. J.	Gadsden	R.	7-19-97	Miller, A. O.	Lebanon	R.	8-7-97
Bennington, A. M.	Max	R.	7-17-97	Noe, R. B.	Thorntown	H.	8-9-97
Bonnell, E. G.	Lebanon	R.	9-9-97	Owsley, Wm. J.	Thorntown	R.	8-9-97
Bonnell, T. A.	New Brunswick	R.	7-21-97	Porter, J. C. R.	Lebanon	R.	7-15-97
Brown, E. L.	Thorntown	E.	7-26-97	Purdy, J. C.	Terhune	R.	8-3-97
Burk, T. P.	Advance	R.	8-6-97	Reagan, Jesse S.	Lebanon	R.	7-15-97
Coons, H. N.	Lebanon	H.	7-17-97	Redden, Thos. O.	Whitestown	R.	7-15-97
Cotton, Henry T.	Zionsville	NC	7-28-97	Rose, M. H.	Thorntown	R.	7-26-97
Davis, David B.	Thorntown	R.	9-25-97	Sanders, L. A.	Hazlerigg	R.	7-17-97
Dorman, W. A.	Lebanon	R.	7-21-97	Schultz, Wm. H.	Lebanon	R.	7-15-97
Everitt, Wm. E.	White Lick	R.	7-26-97	Shelburne, Wm. T.	Zionsville	R.	8-1-97
Finch, A. P.	Jamestown	R.	10-20-97	Shields, J. S.	Milledgeville	R.	7-15-97
Fitch, Wm.	Lebanon	R.	7-15-97	Smith, Carter H.	Lebanon	R.	7-23-97
Hall, S. A.	Advance	R.	7-19-97	Steelsmith, J. M.	Dot	R.	7-17-97
Hamilton, Jno. A.	Advance	E.	8-7-97	Sutherland, Jas. F.	Lebanon	R.	12-22-97
Hardy, J. S.	Lebanon	R.	7-14-97	Tucker, J. E.	Elizaville	PM	8-14-97
Heady, W. S.	Jamestown	R.	8-3-97	Turner, T. S.	Lebanon	E.	7-15-97
Hendricks, J. L.	Lebanon	R.	8-7-97	Umberhine, C. D.	Reese Mills	R.	7-26-97
Hurt, Geo. R.	Thorntown	R.	7-21-97	Van Nuy, Mary M.	Lebanon	R.	7-24-97
Jennings, Caswell	White Lick	R.	7-26-97	Walker, D. R.	Reese Mills	R.	7-22-97
Johns, E. D.	Zionsville	R.	11-11-97	Warley, O. P.	Lebanon	PM	7-15-97
Jones, A. B.	Lebanon	R.	7-19-97				

Regular, 44; Eclectic, 4; Homeopathic, 3; Physio-Medical, 3; not classed, 1. Total, 55.

Brown County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Browning, Nath	Needmore	R.	7-19-97	Moser, J. P.	Spearsville	R.	8-7-97
Fleener, Jos. N.	Needmore	R.	7-17-97	Ralph, A. J.	New Bellsville	R.	7-17-97
Genolin, J. F.	Nashville	R.	7-14-97	Ross, Jno. J. C.	Nashville	R.	7-15-97
Griffitt, J. G.	Nashville	R.	7-14-97	Ward, Jas. G.	Bean Blossom	R.	7-21-97
Griffitt, A. S.	Nashville	R.	7-14-97	Wilson, S. C.	Pikes Peak	PM.	7-31-97
Helton, Alfred	Belmont	R.	8-2-97				

Regular, 10; Physio-Medical, 1. Total, 11.

Carroll County.

Abston, Jesse M.	Radnor	R.	7-17-97	Kidd, W. J.	Burlington	E.	8-17-97
Angell, Chas.	Pittsburgh	R.	7-9-97	Landes, Benj. F.	Burlington	E.	9-3-97
Angell, Chas. E.	Delphi	R.	7-10-97	Loop, Wm. M.	Deer Creek	R.	9-13-97
Armstrong, E. W.	Flora	R.	7-20-97	Lyons, F. P.	Flora	R.	10-5-97
Armstrong, F. G.	Camden	R.	9-6-97	McCleary, D. A.	Deer Creek	R.	9-13-97
Brown, Nathaniel	Flora	E.	7-26-97	Peter, E. L.	Flora	NC	9-23-97
Carney, C. E.	Pymont	R.	8-25-97	Plank, Wm. H.	Deer Creek	R.	10-2-97
Cartter, Henry	Bringinghurst	E.	7-21-97	Robinson, F. H.	Delphi	H.	9-4-97
Chittick, A. J.	Burlington	R.	9-3-97	School, C. E.	Camden	R.	7-21-97
Clymer, Jos. T.	Patton	E.	9-3-97	Sharrer, W. F.	Delphi	R.	7-14-97
Cochran, I. N.	Delphi	R.	8-19-97	Shultz, J. J.	Delphi	E.	7-21-97
Conway, P. W.	Ockley	R.	9-6-97	Smith, Wickliffe	Delphi	R.	10-15-97
Cook, Andrew J.	Flora	E.	10-27-97	Snyder, Benj. F.	Camden	R.	8-4-97
Crampton, C. C.	Delphi	R.	7-14-97	Sonder, C. L.	Burrows	R.	7-14-97
Cromer, Jas. R.	Flora	E.	7-30-97	Tidrick, R. R.	Bringinghurst	R.	8-25-97
Galbraith, W. H.	Rockfield	R.	7-9-97	Trobaugh, Wm. A.	Cutler	R.	7-31-97
Jackson, C. P.	Bringinghurst	NC	9-10-97	Walker, Edward	Delphi	E.	7-22-97
Kennard, J. L.	Yeoman	R.	7-16-97				

Regular, 23; Eclectic, 9; Homeopathic, 1; not classed, 2. Total, 35.

Cass County.

Allen, H. J.	Logansport	H.	7-16-97	Kane, F. C.	Lucerne	R.	9-6-97
Andrews, Jas.	Logansport	H.	7-17-97	Kistler, F. M.	Royal Center	E.	8-18-98
Baker, Ira J.	Logansport	H.	7-17-97	Ra-R-se, N. J.	Lucerne	E.	8-3-97
Baldwin, T.	Galveston	E.	7-19-97	Leasure, Lida P.	Logansport	R.	10-19-97
Ballard, J. W.	Logansport	H.	7-23-97	Leisher, C. A.	Logansport	R.	7-15-97
Banta, Henry J.	Logansport	R.	8-12-97	Loop, Z. U.	Galveston	R.	7-19-97
Barnfield, Jno. H.	Logansport	R.	7-9-97	Lybrook, W. E.	Y'ng America	R.	*
Bell, W. H.	Logansport	R.	7-15-97	Lynas, J. B.	Logansport	PM.	7-16-97
Bradfield, B. D.	Logansport	R.	7-9-97	Miller, L. C.	Twelve Mile	R.	9-2-97
Busjohn, F. A.	Logansport	R.	*	Miller, H. H.	Galveston	R.	*
Cady, N. W.	Logansport	R.	7-15-97	Millian, David	Royal Center	E.	8-30-97
Canfield, Sarah	Logansport	E.	7-23-97	Milligan, J. W.	Logansport	R.	8-4-97
Colman, Asa	Logansport	E.	*	Neff, J. N.	Logansport	R.	8-7-97
Cowgill, N. C.	Logansport	E.	11-16-97	Neff, J. L.	Walton	R.	7-16-97
Crismond, J. M.	Logansport	E.	7-16-97	Nye, A. F.	Logansport	E.	11-19-97
Downing, J. A.	Logansport	E.	11-15-97	Parrish, H. D.	Clymers	R.	7-19-97
Dutchess, C. P.	Walton	R.	7-27-07	Powell, J. Z.	Logansport	E.	7-15-97
Engler, Owen	Walton	NC	8-13-97	Quick, R. H.	New Waverly	R.	8-28-97
Gilbert, Jas. L.	Logansport	R.	7-22-97	Quick, L. L.	New Waverly	R.	7-29-97
Gould, E. P.	Royal Center	R.	7-19-97	Rogers, Jos. G.	Logansport	E.	10-1-97
Graves, Arthur E.	New Waverly	R.	7-31-97	Shultz, Jno. H.	Logansport	E.	7-18-97
Gray, Andrew J.	Y'ng America	R.	7-19-97	Shultz, Jno. H.	Logansport	E.	7-15-97
Halahan, Jos.	Logansport	R.	*	Smith, J. S.	Galveston	R.	7-15-97
Hatch, E. M.	Logansport	H.	7-26-97	Snyder, A. D.	Onward	R.	8-12-98
Hattery, H. D.	Logansport	R.	7-15-97	Snyder, E. D.	Onward	R.	9-10-97
Hermann, F. J.	Logansport	R.	9-8-97	Stevrett, Jos. E.	Logansport	R.	7-19-97
Hetherington, J. P.	Logansport	E.	7-15-97	Stevens, B. C.	Logansport	R.	7-15-97
Hill, H. B.	Logansport	R.	*	Stewart, M. B.	Logansport	R.	8-7-97
Holloway, W. A.	Logansport	R.	*	Thomas, C. L.	Logansport	R.	7-29-97
Hunt, Mae H.	Logansport	R.	7-15-97	Tucker, A. W.	Logansport	R.	7-15-97
Jordan, M. A.	Logansport	R.	7-22-97	Ward, S. H.	Logansport	H.	7-17-97
				Zinninger, H. A.	Lucerne	R.	*

Regular, 45; Eclectic, 11; Homeopathic, 6; Physio-Medical, 1; not classed, 1. Total, 64.

Clark County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Adair, Sam'l L.	N. Wash'ton	R.	11-28-97	Leech, W. J.	Sellersburg	R.	*
Allhands, D. S.	N. Wash'ton	R.	*	Lewis, Benj. Z.	Utica	E.	7-16-97
Allhands, F. D.	Vesta	R.	*	Loomis, J.	Jeffersonville	H.	7-15-97
Bottorff, C. M.	Charlestown	R.	7-27-97	Mayfield, A. M.	Bethlehem	R.	12-21-97
Bruner, E. W.	Jeffersonville	R.	12-22-97	McClure, S. C.	Jeffersonville	R.	7-29-97
Carr, F. M.	Oregon	R.	12-28-97	McClure, C. B.	Jeffersonville	R.	8-4-97
Conn, W. D.	Otisco	R.	7-20-97	Meloy, Jno. M.	Sellersburg	R.	*
Coombs, D. H.	Charlestown	R.	8-2-97	Nickles, Jno. M.	Sellersburg	R.	12-22-97
Davis, Jacob T.	Jeffersonville	R.	7-22-97	Peyton, D. C.	Jeffersonville	R.	7-23-97
Dodge, W. A.	Jeffersonville	R.	10-4-97	Reynolds, Jas. M.	Memphis	R.	7-26-97
Elrod, E. L.	Henryville	R.	7-28-97	Ruddell, I. N.	Jeffersonville	R.	7-24-97
Federman, C. A.	Utica	R.	9-17-97	Samuels, W. L.	Jeffersonville	R.	8-2-97
Flynn, Ed. W.	Jeffersonville	R.	8-4-97	Secoy, S. H.	Jeffersonville	H.	8-2-97
Gaines, J. W.	Jeffersonville	R.	9-21-97	Sheets, W. H.	Jeffersonville	R.	7-22-97
Graham, Thos. A.	Jeffersonville	R.	7-22-97	Stalker, Benj. F.	Borden	R.	8-10-97
Graham, Oliver P.	Jeffersonville	R.	9-4-97	Stockwell, Jno. S.	Charlestown	R.	7-29-97
Griggs, O. B.	Charlestown	R.	10-7-97	Taggart, R. S.	N. Wash'ton	R.	12-13-97
Hancock, C. F. C.	Jeffersonville	R.	7-19-97	Taggart, Jno. F.	Solon	R.	10-19-97
Hauss, Q. Rob't	Sellersburg	E.	8-17-97	Tinsley, E. C.	Jeffersonville	R.	7-26-97
Haymaker, G. W.	Charlestown	R.	*	Townsend, T. M.	Jeffersonville	R.	10-23-97
Hazard, S. D.	Prather	R.	10-1-97	Walker, Jas. H.	Henryville	R.	7-28-97
Hearn, H. O.	Marysville	R.	8-13-97	Wells, F. M.	Charlestown	R.	*
Jackson, Sarah C.	Jeffersonville	R.	10-4-97	Williams, L. L.	Jeffersonville	R.	10-23-97
Jones, C.	Charlestown	R.	7-19-97	Work, W. F.	Charlestown, NC.	R.	*
Lampton, Geo. W.	Jeffersonville	R.	7-27-97				

Regular, 44; Eclectic, 2; Homeopathic, 2; not classed, 1. Total, 49.

Clay County.

Allen, H. P.	Bowling Green	R.	7-29-97	Hollingsworth, S. G.	Brazil	H.	10-14-97
Asbury, W. H. H.	Clay City	R.	11-5-97	James Oliver	Cary	R.	9-6-97
Bartholomew, N. B.	Poland	R.	8-30-97	McCullough, F. B.	Brazil	R.	*
Black, Silas D.	Brazil	R.	7-14-97	Menough, T. F.	Brazil	R.	*
Boor, M. A.	Staunton	R.	7-19-97	Moss, K. R.	Brazil	R.	7-15-97
Byers, L. S.	Staunton	R.	*	Moss, Jas. K.	Ashboro	R.	10-21-97
Chamberlain, W. L.	Poland	R.	7-20-97	Modesitt, J. A.	Clay City	R.	7-21-97
Culbertson, R. H.	Brazil	R.	8-6-97	Nall, A. H.	Hoosierville	E.	7-16-97
Cushman, D. W.	Cloverland	R.	7-6-97	Nussell, Fred k.	Brazil	R.	7-19-97
Dilley, F. C.	Brazil	R.	*	Orr, Wm. H.	Harmony	R.	7-15-97
Elliott, T. A.	Poland	R.	12-24-97	Pell, Geo. M.	Carbon	R.	8-4-97
Finch, G. R.	Center Point	R.	9-11-97	Rundell, A. E.	Center Point	R.	8-5-97
Finley, Geo. Wm.	Harmony	R.	7-14-97	Smith, Jacob F.	Brazil	R.	7-24-97
Freed, Martin A.	Clay City	R.	8-17-97	Sourwine, J. D.	Brazil	R.	7-15-97
Gantz, Richard	Saline City	R.	7-19-97	Spelbring, B. F.	Bowling Green	E.	7-29-97
Gastineau, Henry	Howesville	R.	*	Stevenson, M. D.	Saline City	R.	8-11-97
Gerino, Jno. B.	Brazil	NC.	7-15-97	Swinehart, M. H.	Ashersville	NC.	8-27-97
Gifford, J. C.	Brazil	R.	7-21-97	Thornton, Felix G.	Knightstown	R.	7-15-97
Gifford, W. H.	Brazil	R.	10-6-97	Tulley, A. F.	Brazil	R.	7-15-97
Glasgo, T. A.	Brazil	R.	9-11-97	VanSandt, Wm. H.	Carbon	R.	8-11-97
Griffith, Lewis C.	Cary	R.	9-16-97	Veach, P. H.	Staunton	R.	9-8-97
Halo, Levi A.	Middlebury	R.	8-19-97	Williams, John	Bowling Green	E.	9-16-97
Hawkins, Robt. W.	Brazil	R.	7-14-97	Wiltshire, R. A.	Bowling Green	E.	7-28-97
Hill, J. S.	Brazil	R.	7-8-97	Witty, B. W. F.	Perth	R.	7-23-97
Holmes, Benj. F.	Ashersville	R.	7-21-97	Wolfe, C. H.	Clay City	R.	9-30-97

Regular, 43; Eclectic, 4; Homeopathic, 1; not classed, 2. Total, 50.

Clinton County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Allen, S. V.	Pickards	NC	*	Knapp, S. O.	Frankfort	R	7-14-97
Bergen, E. D.	Frankfort	H	7-14-97	Koons, M. T.	Mulberry	R	7-20-97
Bogan, E. W.	Kirklin	R	*	Lambert, I. C.	Colfax	PM	7-24-97
Bonham, D. M.	Mulberry	NC	7-20-97	Martin, M. L.	Forest	R	7-19-97
Borger, D. D.	Frankfort	E	7-28-97	McConnell, M. W.	Frankfort	R	7-29-97
Bowers, B. E.	Kirklin	R	10-6-97	McDonald, T. G.	Frankfort	R	7-15-97
Bowers, Valentine	Frankfort	R	7-23-97	McGuire, Wm. H.	Frankfort	E	7-15-97
Brier, U. G.	Frankfort	PM	7-15-97	McMurry, J. S.	Frankfort	R	7-29-97
Brown, Geo. W.	Frankfort	R	7-17-97	Michael, C. W.	Hillisburg	R	10-22-97
Canfield, M. S.	Frankfort	E	7-14-97	Milburn, R. C.	Colfax	R	7-19-97
Carson, J. C.	Frankfort	R	7-14-97	Milburn, J. E.	Colfax	R	7-19-97
Chittick, Chas.	Frankfort	R	8-17-97	Moore, A. V.	Michiganto'n	R	10-12-97
Clauser, G. A.	Rossville	R	7-29-97	Morrison, O. A. J.	Middlefork	R	9-4-97
Coon, Hiram J.	Colfax	R	8-7-97	Osborn, Jas.	Moran	E	7-30-97
Cooper, Wilson T.	Saireleville	R	7-15-97	Parker, A. P.	Kirklin	R	8-12-97
Davis, W. C.	Frankfort	R	*	Powell, T. J.	Michiganto'n	R	8-7-97
Davis, Newton C.	Frankfort	H	7-14-97	Quick, Wm. R.	Etna Mills	R	7-29-97
Douglass, Sam'l	Frankfort	R	7-15-97	Rinehart, E.	Forest	R	7-19-97
Douglass, I. W.	Michiganto'n	R	7-15-97	Robison, T. B.	Rossville	R	7-28-97
Doyal, R. N.	Frankfort	R	7-24-97	Sigler, J. N.	Geetingsville	R	7-17-97
Earhart, I. S.	Mulberry	R	7-23-97	Sims, S. B.	Frankfort	R	7-20-97
Edmons, O. W.	Frankfort	R	*	Speitel, H. B.	Frankfort	E	7-30-97
Elliott, Jno. W.	Sedalia	R	11-27-97	Squier, Ellis A.	Frankfort	E	9-30-97
Ewing, Leander	Colfax	R	7-16-97	Tharp, Levi	Boyleston	R	7-16-97
Fisher, Sam'l B.	Rossville	E	8-7-97	Tidrick, Ruskin O.	Michiganto'n	R	9-16-97
Fisher, Jno. J.	Rossville	NC	7-29-97	Webster, Jas. G.	Colfax	H	8-9-97
Gard, Oliver	Frankfort	R	7-24-97	Wilson, A. M.	Frankfort	R	10-8-97
Hatfield, Jas. F.	Moran	R	8-27-97	Wise, Jas. B.	Frankfort	H	7-20-97
Hill, Clarence	Frankfort	R	*	Young, M. W.	Frankfort	R	7-16-97
Holmes, H. D.	Saireleville	R	8-6-97	Yundt, A. M.	Mulberry	R	8-3-97
Holmes, T. F.	Pickard	R	7-17-97	Zimmerman, C. A.	Frankfort	PM	9-2-97
Hornaday, W. H.	Forest	R	7-28-97	Zinn, C. A.	Michiganto'n	R	8-11-97
Jones, Frank C.	Frankfort	R	7-15-97				

Regular, 48; Eclectic, 7; Homeopathic, 4; Physio-Medical, 3; not classed, 3. Total, 65.

Crawford County.

Baylor, G. W.	Milltown	R	7-6-97	King, N. W.	Taswell	N. C.	7-10-97
Bushaw, B. E.	Marengo	R	7-1-97	Knight, J. B.	Taswell	R	7-13-97
Davis, D. F.	Marengo	R	7-13-97	Luckett, C. D.	English	E	7-13-97
Fetzer, Jno. E.	Marengo	R	7-13-97	Meeks, Lewis	West Fork	E	7-8-97
Gobbell, F. R.	English	R	7-15-97	Merrilees, W. M.	Leavenworth	H	7-12-97
Hammond, J. M.	English	R	7-18-97	Myers, Josephus	Alton	R	7-12-97
Hazlewood, F. W.	English	R	7-13-97	Shacklett, H. B.	Leavenworth	R	7-1-97
Hazlewood, G. R.	English	R	8-2-97	Smith, Jas. H.	Eckerty	R	8-11-97
Holleratt, E. P. T.	Alton	R	7-13-97	Stewart, L. B.	Marengo	H	7-1-97
Jenkins, J. M.	Alton	R	7-10-97	Stewart, C. E.	Marengo	R	*
Kimes, D. W.	Eckerty	B	7-10-97	Walls, Jno. W.	Eckerty	R	7-13-97

Regular, 17; Eclectic, 1; Homeopathic, 2; Botanic, 1; not classed, 1. Total, 22.

Davies County.

Anderson, J. W.	Odon	R	9-2-97	Millis, E. D.	Plainville	R	7-17-97
Arthur, H. M.	Washington	R	*	Moore, C. C.	Washington	R	7-14-97
Arthur, Martin L.	Washington	R	*	Moore, J. L.	Washington	R	7-14-97
Carier, D. R.	Epsom	R	7-26-97	Parks, J. F.	Cumback	R	7-27-97
Clark, J. W.	Washington	E	9-2-97	Parr, G. L.	Washington	R	7-21-97
Culmer, Stephen O.	Odon	R	8-10-97	Pickel, Jno. M.	Plainville	R	8-12-97
Culmer, Geo. F.	Odon	R	8-9-97	Pope, R. B.	Washington	R	7-26-97
Duffendall, W. B.	Washington	H	7-14-97	Porter, Mc. G.	Elnora	E	7-28-97
DeMott, Jerome	Odon	R	9-8-97	Raggsdale, M. H.	Glen Dale	E	7-17-97
Evans, W. L.	Loogootee	R	*	Rankin, T. B.	Odon	R	9-6-97
Faith, A. H.	Washington	R	7-19-97	Seanlan, Michael	Washington	R	11-15-97
Fitzgibbon, Jno.	Washington	R	7-15-97	Scudder, C. P.	Washington	R	7-15-97
Girs, Henry	Washington	R	7-15-97	Shrwood, H. I.	Elnora	R	7-23-97
Hedrick, W. H.	Odon	H	9-8-97	Smoot, D. B.	Glen Dale	R	7-21-97
Hedrick, Jno.	Alfordsville	H	11-11-97	Tolliver, M. P.	Elnora	R	7-21-97
Herr, Henry	Washington	R	8-7-97	Tolliver, Wm. J.	Elnora	R	7-22-97
Horral, Wm. A.	Washington	E	7-17-97	Trainer, C. E.	Cornettsville	R	7-21-97
Knapp, A. B.	Washington	R	12-31-97	Way, J. W.	Alfordsville	R	9-18-97
Lane, A. K.	Odon	R	8-10-97	Willeford, Wm. C.	Washington	R	7-19-97
McCowan, C. C.	Washington	R	7-14-97	Willeford, Geo. W.	Washington	R	7-15-97
McCracken, R. W.	Montgomery	R	7-19-97	Winton, C. F.	Washington	R	7-16-97
McKittick, O. H.	Plainville	R	8-31-97	Yenne, Chas. H.	Washington	R	7-15-97
McPherson, S. L.	Montgomery	R	7-21-97	Young, M. H.	Raggsdale	R	7-31-97

Regular, 39; Eclectic, 4; Homeopathic, 3. Total, 46

Dearborn County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Beckett, Geo. T.	Aurora	R.	9-30-97	Jaquaith, O. S.	Lawrenceburg	R.	9-16-97
Boersig, J. A.	Lawrenceburg	R.	7-22-97	Kyle, Thos. M.	Aurora	R.	9- 8-97
Bond, R. C.	Aurora	R.	10- 2-97	Lazenby, J. R.	Bright	R.	8- 9-97
Bond, M. L.	Aurora	R.	9-18-97	Libbert, E. J.	Far's Retreat	R.	8-27-97
Bowers, A. J.	Moore's Hill	R.	8-26-97	Liddle, Jno. R.	Bright	R.	10- 5-97
Chamberlain, S. B.	Lawrenceburg	R.	7-15-97	Miller, A. G.	Dillsboro.	E.	11-19-97
Collins, Samuel H.	Lawrenceburg	R.	7-22-97	Pryor, Wm. E.	Aurora	H.	12-16-97
Daughters, A. P.	Moore's Hill	R.	9- 8-97	Rectanus, Fred'k.	Aurora	R.	10-19-97
Duncan, Wm. F.	Kyle	R.	8-21-97	Sale, F. H.	Aurora	R.	7-19-97
Dwyer, H. H.	Lawrenceburg	H.	7-29-97	Sale, F. H.	Dillsboro	NC	11-19-97
Elliott, C. V.	Wrights Cor.	R.	8-14-97	Sale, J. H.	Dillsboro	NC	11-19-97
Emmert, E. J.	Lawrenceburg	R.		Schooley, Wm. A.	Guliford	R.	7-15-97
Fagaby, A. T.	Lawrenceburg	R.	7-26-97	Smith, G. F.	Weisburg	R.	8-31-97
Ford, O. P. M.	Dillsboro	R.	10-11-97	Smith, Edwin	Aurora	H.	10-27-97
Gatch, Jas. D.	Lawrenceburg	R.		Sutton, H. H.	Aurora	R.	8-19-97
Givan, G. C.	Lawrenceburg	R.	8-30-97	Swales, W. H.	Logan	R.	8-28-97
Garbold, A. A.	Lawrenceburg	R.	10- 1-97	Swales, H. W.	Logan	R.	7-29-97
Heaton, Conley	Aurora	R.	9-20-97	Vogt, A. Wm.	New Alsace	R.	7-17-97
Heil, C. P.	Lawrenceburg	E.	7-28-97	Walter, C. A.	Lawrenceburg	R.	7-30-97
Henry, Wm. C.	Aurora	R.	9-27-97	Wilson, N. H.	Dillsboro	R.	8- 3-97
House, Jno. W.	Lawrenceburg	R.	7-23-97	Wolf, Geo.	Manchester	H.	8-14-97

Regular, 34; Eclectic, 2; Homeopathic, 4; not classed, 2. Total, 42.

Decatur County.

Alexander, J. H.	Greensburg	R.	7-13-97	Jerman, L. W. D.	New Point	R.	7-14-97
Ballard, D. J.	St. Paul	R.	7- 9-97	Johnson, H.	New Point	R.	7-16-97
Beall, Chas. M.	Clarksburg	R.	7-24-97	Johnston, Thos.	Greensburg	R.	7-15-97
Beck, Connie B.	Waynesburg	R.	8- 2-97	Lorimor, J. H. D.	Forest Hill	R.	7-28-97
Bobbitt, Jno. H.	Greensburg	R.	7-14-97	Miller, T. E. F.	Westport	H.	7-28-97
Boyer, J. M.	Sardinia	R.	10-30-97	Parker, J. W.	Adams	E.	7-24-97
Bracken, Wm.	Greensburg	R.	7- 9-97	Reilly, J. H. S.	Sardinia	R.	10- 9-97
Bunker, L. C.	Greensburg	E.	7-15-97	Riley, E. T.	Greensburg	R.	7-15-97
Burroughs, Jas. P.	Westport	R.	10-25-97	Sanders, I. M.	Adams	R.	7-21-97
Clark, Thos. J.	Letts Corner	E.	7-29-97	Schofield, J. V.	Greensburg	R.	7-17-97
Covert, C. A.	Greensburg	R.	7-19-97	Smith, Jno. L.	Clarksburg	R.	8-31-97
Crawford, Geo. S.	Clifty	R.	9- 7-97	Thomas, R. M.	Greensburg	R.	7-15-97
Crowell, E. B.	Greensburg	E.	7-24-97	Thompson, O. K.	Greensburg	H.	
Dailey, F. M.	Millhausen	R.	9-17-97	Tobias, Jno. M.	Burney	E.	7-16-97
Denny, Geo. E.	Alert	R.	10- 4-97	Vest, M. C.	Forest Hill	R.	7-26-97
Doremus, G. D.	Greensburg	R.	10-21-97	Weaver, D. W.	Greensburg	H.	7-15-97
Givan, S. E.	Burney	R.	7-15-97	Webb, W. H.	Adams	R.	7-28-97
Gullefor, Thos. B.	Greensburg	H.	7-15-97	Welch, Oliver F.	Westport	R.	11-29-97
Hause, Wm.	Westport	E.	7-16-97	White, B. S.	Letts Corner	R.	7-22-97
Hitt, J. Y.	Greensburg	R.	7-23-97	Williams, M. H.	Letts Corner	R.	7-21-97
Hitt, S. B.	Greensburg	R.	9- 3-97	Wood, J. M.	Greensburg	R.	7-17-97
Howard, J. W.	St. Paul	R.	10-29-97	Wooden, W. H.	Greensburg	R.	8- 9-97
Howard, C. L.	St. Paul	R.	7-27-97	Wright, S. V.	Greensburg	R.	7-19-97
Howard, F. M.	St. Paul	R.	10-28-97				

Regular, 37; Eclectic, 6; Homeopathic, 4. Total, 47.

Dekalb County.

Baxter, Jno. C.	Auburn	R.	*	Kaadt, P. S.	Ashley	R.	*
Bennett, Jas. B.	Butler	E.	7-11-97	Kester, R. S.	Butler	H.	7-20-97
Bevier, Wm.	Waterloo	E.	7-16-97	Lilley, Harrison	Butler	H.	7-24-97
Bevier, Frank.	Waterloo	E.	7-17-97	Matheny, T. G.	Auburn	R.	7-30-97
Bowman, H. W.	St. Joe	R.	*	Nusbaum, Wm. H.	Auburn	R.	7-15-97
Broughton, Frank.	Waterloo	R.	7-21-97	Phillips, A. F.	Corunna	R.	8- 2-97
Browand, N. C.	Garrett	R.	7-20-97	Riley, Jas. L.	Artie	R.	*
Brunson, V. C.	Newville	R.	10-26-97	Rudolph, O. F.	Corunna	R.	7-30-97
Buchtel, I. O.	Auburn	H.	7-26-97	Sebring, D. A.	Auburn	R.	7-23-97
Campbell, E. V.	Butler	R.	7- 8-97	Sheffer, B. S.	St. Joe	R.	8-18-97
Carey, W. W.	Spencerville	R.	8- 6-97	Showalter, J. E.	Waterloo	R.	*
Carpenter, T. J.	Waterloo	R.	7-26-97	Shumaker, W. F.	Butler	R.	7-27-97
Carperder, W. P.	Butler	R.	7-24-97	Sparling, J. H.	Auburn	R.	8-21-97
Clevenger, J. A.	Garrett	R.	7-20-97	Snyder, Fairfield	Corunna	R.	7-20-97
Darby, A. B.	Waterloo	R.	*	Stanetz, Z. H.	Auburn	R.	7-16-97
Fanning, F. B.	Butler	R.	7-15-97	Stewart, C. S.	Garrett	R.	*
Fanning, Fred. W.	Butler	R.	7-15-97	Strouse, J. P.	Garrett	NC	9- 6-97
Farrington, A. S.	Waterloo	E.	7-31-97	Swarts, V. M. V.	Auburn	R.	7-15-97
Hines, F. M.	Auburn	R.	8- 3-97	Swarts, D. J.	Auburn	R.	7-15-97
Hughes, E. J.	Garrett	R.	11-13-97	Thompson, Jno. F.	Garrett	R.	8-17-97
Hughes, J. W.	Waterloo	R.	7-19-97				

Regular, 33; Eclectic, 4; Homeopathic, 3; not classed, 1. Total, 41.

Delaware County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Addington, I. H.	Muncie	R.	7-15-97	Marshall, R.	Cowan	R.	7-24-97
Allen, Seth	Shideler	R.	8-14-97	Martin, J. S.	Muncie	H.	7-14-97
Ames, Geo. F.	Eaton	R.	7-17-97	McCrillus, C. C.	Muncie	R.	7-15-97
Atkinson, Jas. M.	Eaton	R.	7-19-97	McKinney, D. R.	Cowan	R.	7-14-97
Baird, J. V.	Albany	E.	10-29-97	Mitchell, Harvey	Muncie	R.	7-15-97
Baird, Mary A.	Albany	E.	10-29-97	Mock, A. R.	Muncie	R.	7-17-97
Ball, L. L.	Muncie	R.	7-15-97	Munsey, D. O.	Gaston	R.	8-6-97
Baker, Harry H.	Muncie	H.	9-21-97	Munsey, Jesse S.	Gaston	R.	7-27-97
Bell, J. N.	N. Burlington	R.	7-22-97	Murray, A. P.	Albany	R.	9-15-97
Birchfield, J. W.	Oakville	R.	7-17-97	Murray, A. L.	Eaton	R.	7-17-97
Bowers, J. F.	Muncie	R.	7-16-97	Payton, Lewis	Muncie	PM	7-16-97
Bowles, T. J.	Muncie	R.	10-23-97	Phinney, A. J.	Muncie	H.	7-15-97
Boydén, W. J.	Muncie	R.	9-16-97	Poland, U. G.	Muncie	R.	7-15-97
Bragg, Wm. N.	Albany	R.	9-23-97	Polk, E. E.	Muncie	PM	8-13-97
Brandon, W. S.	Daleville	R.	9-22-97	Powers, U. G.	Albany	R.	9-13-97
Brandon, Oscar W.	Daleville	R.	9-21-97	Puckett, E. J.	Muncie	R.	7-23-97
Brennan, V. G.	Muncie	R.	11-22-97	Quick, J. C.	Muncie	PM	9-22-97
Bucklin, G. W.	Muncie	R.	7-15-97	Quick, Jas. M.	Stout	PM	
Bunch, R. A.	Muncie	E.	7-14-97	Reasoner, O. I.	Muncie	R.	8-3-97
Burcham, H. C.	Albany	R.	11-5-97	Ried, Sam'l M.	Muncie	R.	7-15-97
Cecil, Aron A.	Muncie	R.	7-15-97	Rickard, Wm. A.	Muncie	E.	8-16-97
Cowing, Hugh A.	Muncie	R.	7-15-97	Ross, J. C.	Muncie	E.	7-17-97
Downing, J. R.	Yorktown	R.	9-10-97	Ross, N. B.	DeSoto	E.	7-15-97
Downing, J. F.	Yorktown	R.	9-11-97	Russell, W. H.	Muncie	R.	7-16-97
Dunn, Wm. H.	Gaston	R.	7-29-97	Schaub, Dan'l	N. Madison	V.	7-16-97
Egbert, W. A.	Muncie	H.	8-19-97	Searcy, Geo. H.	Muncie	R.	7-15-97
Ellis, E. W.	Muncie	PM		Shideler, J. K.	Muncie	R.	7-19-97
Eskeu, W. C.	Muncie	R.	7-16-97	Shields, E. A.	Muncie	R.	7-14-97
Fallis, A. L.	Gaston	PM	8-31-97	Shively, A. H.	Yorktown	R.	7-15-97
Fowler, Elmer	Albany	NC	11-12-97	Shively, D. M.	Yorktown	PM	8-12-97
Frazier, Chas.	Muncie	R.	9-8-97	Shoemaker, D. M.	Muncie	E.	8-10-97
Good, A. H.	Selma	R.	8-10-97	Shoemaker, R. C.	Muncie	E.	8-3-97
Gray, Frank P.	Muncie	R.	8-16-97	Smith, Wm.	Muncie	PM	7-15-97
Green, Geo. R.	Muncie	R.	7-14-97	Smith, Chas. W.	Selma	R.	7-14-97
Griffin, Anna M. L.	Muncie	R.	*	Snodgrass, N. E.	Cammack	PM	7-17-97
Griffith, E. T.	Muncie	R.	7-22-97	Snodgrass, B. J.	Cammack	PM	7-21-97
Harris, J. M.	Muncie	R.	*	Spurgeon, Wm. A.	Muncie	PM	7-12-97
Hastings, Seth G.	Muncie	H.	7-17-97	Stick, Jessie	Albany	E.	*
Hayden, Jno. H.	Stout	PM	8-4-97	Stout, O. M.	Stout	PM	8-5-97
Hill, Frank E.	Muncie	R.	*	Summers, H. C.	Daleville	R.	8-11-97
Jackson, F. G.	Muncie	R.	7-14-97	Surber, A. C.	Muncie	R.	7-23-97
Jeffrey, H. S.	Reed	R.	7-16-97	Trent, Isaac N.	Muncie	R.	7-16-97
Julian, Jas. F.	Gaston	E.	7-16-97	Trowbridge, D. L.	Muncie	E.	8-14-97
Kemper, G. W. H.	Muncie	R.	7-15-97	Tuttle, Jno. R.	Wheeling	R.	9-6-97
Kemper, A. T.	Muncie	R.	8-5-97	Wallace, G. E.	Muncie	H.	12-30-97
Kilgore, F. T.	Yorktown	R.	*	Whitney, E. A.	Muncie	H.	7-15-97
Larimore, Jos. D.	Muncie	R.	12-13-97	Whitney, Wm. D.	Muncie	R.	7-15-97
LeFavour, Jos.	Albany	R.	*	Williams, Jas. S.	Muncie	R.	7-16-97
Mann, E. B.	Muncie	R.	7-21-97	Winans, H. M.	Muncie	R.	7-15-97
Mansfield, T. J.	Royerton	R.	7-14-97	Woodsorth, W. W.	Muncie	R.	11-11-97

Regular, 67; Eclectic, 11; Homeopathic, 7; Physio-Medical, 13; Vitopathic, 1; not classed, 1. Total, 100.

Dubois County.

Abell, G. H.	Birdseye	B.	9-1-97	Line, Wm. M.	Dubois	R.	7-29-97
Bean, A. M.	Ireland	E.	7-14-97	Line, Wm. A.	Hillham	R.	8-6-97
Bigham, O. A.	St. Anthony	R.	10-9-97	Luckemeyer, L. C.	Huntingburg	R.	11-19-97
Brannock, B. B.	Jasper	R.	7-13-97	Luckemeyer, E. G.	Huntingburg	R.	7-17-97
Cobble, Peter L.	Schnellville	R.	11-2-97	McMahan, Wm. R.	Huntingburg	R.	7-15-97
Cole, John A.	Haysville	R.	8-2-97	Montgomery, G. B.	Huntingburg	R.	8-7-97
Courtney, Thos.	Thales	R.	8-27-97	Mueller, F. M.	Jasper	R.	*
Foster, James C.	Birdseye	E.	8-10-97	Ramsbrook, C. R.	Huntingburg	R.	9-4-97
Friedman, Wm. L.	Jasper	R.	*	Rust, Wm. F.	Holland	R.	9-8-97
Glengelbach, E. E.	Huntingburg	E.	7-20-97	Salb, J. P.	Jasper	R.	7-19-97
Glezen, E. A.	Ireland	R.	7-19-97	Schellhase, F. W.	Celestine	H.	7-21-97
Grim, George B.	Portersville	R.	7-17-97	Simmons, C. N.	Schnellville	R.	7-21-97
Herrmann, W. A.	Altoga	H.	8-18-97	Solomon, J. J.	Hillham	PM	*
Johnson, L. B. W.	Ireland	R.	7-19-97	Stork, H. W.	Holland	R.	9-7-97
Katterhenry, E. H.	Huntingburg	R.	9-29-97	Swartz, C. W.	Huntingburg	R.	7-20-97
Kellams, S. W.	Birdseye	E.	9-1-97	Whittinghill, B. F.	Ellsworth	R.	10-18-97
Kempf, E. J.	Jasper	R.	7-16-97	Williams, G. P.	Huntingburg	R.	7-28-97
Klein, H. P.	Huntingburg	E.	7-29-97	Wollemann, A. G.	Ferdinand	R.	7-23-97
Knapp, Victor	Ferdinand	R.	7-30-97				

Regular, 28; Eclectic, 5; Homeopathic, 2; Physio-Medical, 1; Botanic, 1. Total, 37.

29—BD. OF HEALTH.

Elkhart County.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Aitken, Fred'k.	Bristol	R.	7-23-97	Ihrig, F. M.	Goshen	E.	7-14-97
Ash, E. E.	Goshen	R.	7-15-97	Inks, Jno. S.	Elkhart	R.	10-6-97
Ash, W. N.	Goshen	R.	7-15-97	Irwin, A. J.	Goshen	R.	7-15-97
Baker, Dan'l W.	Benton	R.	8-12-97	Jackson, A. C.	Goshen	R.	7-16-97
Barbour, J. E.	Bristol	H.	11-2-97	Jennings, J. W.	Millersburg	R.	7-17-97
Baumgartner, A. J.	Elkhart	R.	*	Kaufman, Anna G.	Goshen	E.	7-13-97
Beeman, W. J.	Elkhart	R.	8-5-97	Knepple, W. H.	Wakarusa	R.	8-9-97
Benham, F. A.	Elkhart	H.	7-28-97	Kreider, M. K.	Goshen	H.	8-9-97
Bowers, C. C.	Elkhart	R.	7-20-97	Kreider, W. B.	Goshen	H.	7-14-97
Bowman, W. E.	Elkhart	R.	7-19-97	Kyley, Wm. B.	Benton	R.	10-6-97
Bowser, J. M.	Goshen	R.	11-4-97	Latta, M. M.	Goshen	R.	7-16-97
Boyer, D. K.	Wakarusa	R.	7-15-97	Lockwood, R. L.	Elkhart	H.	7-13-97
Brumbaugh, M. T.	Gravelton	PM.	10-15-97	Mast, J. C.	Elkhart	R.	7-20-97
Carey, D. B.	Elkhart	E.	10-21-97	Maston, Chas.	Elkhart	R.	8-9-97
Carper, A. J.	Elkhart	R.	7-16-97	Mathers, Jas.	New Paris	R.	8-5-97
Clark, J. F.	Goshen	R.	7-24-97	Merrill, C. W.	Goshen	R.	*
Collins, Mertie G.	Elkhart	H.	11-19-97	Miller, D. L.	Goshen	R.	7-29-97
Cook, J. Albert	Goshen	R.	7-19-97	Miles, Franklin	Elkhart	R.	*
Defrees, Henry J.	Nappanee	R.	8-5-97	Mumaw, H. A.	Elkhart	H.	7-23-97
Devor, S. M. F.	Elkhart	H.	7-16-97	Myers, J. W.	Middlebury	E.	7-15-97
Dreese, C. L.	Elkhart	R.	7-26-97	Neal, Wm. A.	Elkhart	R.	7-20-97
Dutrow, C. E.	Bristol	R.	*	Niman, C. H.	Elkhart	R.	7-17-97
Eckleman, M. M.	Elkhart	R.	7-20-97	Page, W. B.	Middlebury	H.	7-15-97
Eckleman, F. C.	Elkhart	R.	7-26-97	Peck, M. Eva	Goshen	R.	7-30-97
Eisenbeiss, C. M.	New Paris	R.	12-4-97	Price, W. A.	Nappanee	R.	8-9-97
Eisenbeiss, Sam'l	New Paris	R.	10-23-97	Sensenich, A. S.	Wakarusa	R.	7-29-97
Farver, M. A.	Middleburg	R.	8-18-97	Shoemaker, G. L.	Nappanee	H.	8-12-97
Fisher, Albert L.	Elkhart	H.	7-16-97	Short, Wright	Elkhart	R.	7-16-97
Fleming, J. C.	Elkhart	R.	7-20-97	Sparklin, C. C.	Goshen	R.	7-29-97
Frink, Chas. W.	Elkhart	R.	12-22-97	Spohn, Geo. W.	Elkhart	R.	7-20-97
Goodrich, C. D.	Elkhart	R.	7-17-97	Snapp, Jas. A.	Millersburg	R.	7-27-97
Greiner, Geo. G.	Vistula	R.	8-11-97	Stauffer, H. R.	Nappanee	R.	*
Griffin, A. L.	Elkhart	R.	7-5-97	Statler, Herbert O.	Goshen	R.	*
Haggerty, R. Q.	Elkhart	R.	7-16-97	Stackman, E. D.	Elkhart	R.	8-6-97
Hall, Theron A.	Elkhart	R.	*	Teters, B. F.	Middlebury	R.	7-22-97
Hani, Wm. F.	Elkhart	R.	8-11-97	Thomas, W. H.	Homson	H.	7-20-97
Hauenstein	Elkhart	R.	7-20-97	Turner, Porter	Elkhart	H.	7-21-97
Hawkins, E. P.	Elkhart	R.	9-22-97	Vallette, Wm. O.	Goshen	R.	8-6-97
Hentwole, Jos. H.	Goshen	R.	9-4-97	Waller, Wm. J.	Elkhart	R.	*
Herring, Fred'k.	Goshen	E.	9-15-97	Whipsey, Wm. A.	Elkhart	H.	10-19-97
Holdeman, E.	Wakarusa	R.	12-22-97	Whitmer, B. F.	Goshen	R.	7-15-97
Hoopingamer, G. B.	Elkhart	R.	7-17-97	Wickham, W. W.	Goshen	E.	7-14-97
Hoover, Jno. M.	Goshen	R.	9-24-97	Williams, N. A.	Bristol	R.	7-8-97
Hoover, J. S.	Goshen	R.	9-24-97	Work, J. A.	Elkhart	R.	8-9-97

Regular, 67; Eclectic, 6; Homeopathic, 14; Physio-Medical, 1. Total, 88.

Fayette County.

Brack'ridge, J. W.	Lyons Station	R.	7-9-97	Jones, Geo. E.	Connersville	R.	7-17-97
Chitwood, F. A.	Connersville	R.	*	Logee, H. M.	Connersville	H.	7-19-97
Chitwood, Jno. E.	Connersville	R.	8-1-97	Ludwick, V. D.	Connersville	R.	7-16-97
Chitwood, Joshua	Connersville	R.	7-14-97	McNutt, G. T.	Connersville	R.	7-14-97
Dent, Wm. Henry	Glenwood	R.	7-15-97	Phares, O. P.	Connersville	R.	9-10-97
Derbyshire, E.	Bentonville	R.	7-23-97	Roberts, Elizabeth	Connersville	PM.	*
Dillman, L. D.	Connersville	R.	7-14-97	Shepherd, S. D.	Everton	R.	8-17-97
Ford, Thos. J.	Connersville	R.	7-23-97	Sipe, R. W.	Orange	R.	7-28-97
Gordin, Stanton E.	Alquina	H.	8-6-97	Tyrrel, A. D.	Connersville	E.	7-16-97
Hamilton, S. N.	Connersville	R.	7-15-97	Washburn, H. A.	Bentonville	E.	12-18-97
Heron, Nathan	Connersville	H.	*	Wyman, Chas.	Everton	R.	7-27-97

Regular, 17; Eclectic, 1; Homeopathic, 3; Physio Medical, 1. Total, 22.

Floyd County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Allen, Geo. F.	New Albany	H.	7-24-97	McIntyre, C. W., Sr.	New Albany	R.	7-23-97
Appleman, J. S.	New Albany	R.	11-20-97	McKanny, Anna I.	New Albany	R.	9-24-97
Beust, Benhard.	New Albany	R.	9-32-97	Melton, Oston	New Albany	R.	*
Bowman, Chas.	New Albany	R.	7-12-97	Neat, T. C.	New Albany	R.	7-21-97
Burney, W. A.	New Albany	R.	9-4-97	Reed, R. G.	New Albany	H.	7-27-97
Cannon, G. H.	New Albany	R.	7-21-97	Rice, C. W.	New Albany	E.	7-16-97
Clapp, W. A.	New Albany	R.	7-15-97	Ries, Carrie M.	New Albany	H.	11-30-97
Cook, Chas. P.	New Albany	R.	8-7-97	Rogers, S. T.	New Albany	E.	8-16-97
Davis, Chas. P.	Galena	R.	7-17-97	Rutherford, R. S.	Galena	R.	9-22-97
Davis, Jas. M.	Greenville	R.	7-20-97	Severinghaus, E. A.	New Albany	H.	8-4-97
Easley, E. P.	New Albany	R.	7-14-97	Sigmon, E. L.	New Albany	R.	8-4-97
Erni, G. O.	New Albany	H.	7-15-97	Sloan, Jno.	New Albany	R.	7-17-97
Garev, Dumont.	New Albany	R.	9-1-97	Sparks, M. W.	New Albany	R.	7-15-97
Gaddie, E. R.	New Albany	R.	*	Starr, W. L.	New Albany	R.	7-17-97
Harris, R. W.	New Albany	R.	7-17-97	Starr, I. D.	New Albany	R.	11-2-97
Hauss, A. P.	New Albany	E.	8-4-97	Stewart, Jno. L.	New Albany	R.	7-20-97
Hazlewood, Jno.	New Albany	R.	7-29-97	Taggart, W. J.	Georgetown	R.	*
Hollinger, I. C.	New Albany	R.	7-14-97	Vance, Wm. O.	New Albany	R.	8-17-97
Huggins, R.	New Albany	R.	7-14-97	Walker, J. H.	Floyds Knobs	R.	10-6-97
Jones, Jas. H.	New Albany	R.	12-24-97	Weathers, J. F.	New Albany	R.	8-17-97
King, W. W.	New Albany	R.	10-5-97	Wilcox, F. H.	New Albany	R.	7-22-97
Lemon, Jno. H.	New Albany	R.	7-15-97	Wilcox, S. C.	New Albany	R.	7-24-97
Levi, L. D.	New Albany	H.	7-19-97	Winstanley, W. C.	New Albany	R.	7-15-97
Masgana, E.	New Albany	R.	8-4-97	Wolfe, H. S.	New Albany	R.	8-13-97
Maxedon, R. W.	New Albany	R.	*	Wraw, Jno. T.	New Albany	R.	*
McIntyre, C. W., Jr.	New Albany	R.	7-23-97				

Regular, 42; Eclectic, 3; Homeopathic, 6. Total, 51.

Fountain County.

Armstrong, L. P.	Newtown	R.	10-25-97	Mock, John W.	Covington	R.	7-14-97
Aydelott, Thos. B.	Newtown	R.	8-23-97	Morris, John E.	Attica	R.	10-7-97
Buckner, J. P.	Covington	R.	7-14-97	Myers, C. L.	Covington	R.	*
Burlington, J. C.	Attica	E.	7-28-97	Overmeyer, G. W.	Covington	R.	8-13-97
Burlington, J. R.	Attica	R.	7-28-97	Petet, Marshall	Veedersburg	R.	*
Case, M. T.	Attica	R.	8-23-97	Rice, E. S.	Wallace	E.	7-21-97
Claypool, R. W.	Newtown	R.	9-17-97	Rice, J. T.	Attica	R.	8-16-97
Coggins, C. M.	Coal Creek	R.	8-30-97	Riffe, J. S.	Veedersburg	R.	8-4-97
Colvin, C. M.	Attica	R.	10-20-97	Rowland, Geo.	Covington	R.	7-15-97
Dowdem, Jas. W.	Yeddo	E.	8-4-97	Rupert, A. M.	Attica	R.	9-16-97
Faulkner, A. S.	Hillsboro	R.	8-23-97	Shephard, J. P.	Mellott	R.	9-29-97
Fine, E. M.	Veedersburg	R.	11-3-97	Shoaf, F. A.	Yeddo	R.	*
Finney, C. J.	Attica	R.	*	Songer, Frank	Hillsboro	R.	8-23-97
Goodin, G.	Veedersburg	R.	10-5-97	Sparks, J. F.	Yeddo	R.	7-19-97
Hays, Geo. C.	Hillsboro	R.	8-23-97	Stout, Wm. R.	Covington	R.	7-19-97
Henderson, T. M.	Covington	R.	10-15-97	Tindal, E. F.	Stone Bluff	R.	8-3-97
Henderson, J. T.	Covington	R.	10-15-97	Towey, J. T.	Covington	R.	*
Holly, A. C.	Attica	H.	8-26-97	Williamson, W. N.	Kingman	R.	9-6-97
Keller, J. C.	Silverwood	R.	7-20-97	Williamson, A. A.	Wallace	R.	7-28-97
Knoop, S. M.	Veedersburg	R.	9-6-97	Zinn, J. K.	Covington	PM.	7-15-97
McNeill, W. S.	Veedersburg	R.	*	Zinn, Geo.	Covington	PM.	*
Mendenhall, E. W.	Kingman	R.	9-6-97				

Regular, 37; Eclectic, 3; Homeopathic, 1; Physio-Medical, 2. Total, 43.

Franklin County.

Abbott, June	Whitcomb	E.	8-2-97	Morgan, Jno. O.	Springfield	R.	11-6-97
Anness, Wm. R.	Bath	E.	9-17-97	Owens, R. J.	Cedar Grove	R.	7-22-97
Berry, W. H.	Brookville	R.	7-27-97	Patterson, E. L.	Brookville	R.	9-27-97
Bertenshaw, T. F.	Drewersburg	E.	11-13-97	Quick, Jno. H.	Brookville	R.	7-23-97
Buckingham, G. B.	Brookville	R.	7-16-97	Schum, Chas.	St. Peters	R.	7-20-97
Carter, Calvin	Brookville	R.	7-14-97	Seal, F. C.	Mt. Carmel	E.	8-4-97
Coffey, Bert	Laurel	E.	8-4-97	Simmins, E.	Bloomington	R.	9-25-97
Dunn, Isaac	Andersonville	R.	*	Spilman, F. J., Sr.	Andersonville	R.	7-12-97
Elliot, R. M.	Haysmond	R.	11-17-97	Spilman, F. J., Jr.	Andersonville	R.	7-12-97
Forray, B. F.	Bath	R.	8-24-97	Smith, Andrew J.	Metamora	R.	7-22-97
Garrigus, I. D.	Cedar Grove	R.	7-14-97	Smith, Lula M.	Metamora	E.	7-21-97
Gifford, Sam'l A.	Laurel	R.	8-5-97	Squier, Geo. E.	Brookville	E.	7-15-97
Gregory, Henry, Jr.	Laurel	R.	7-14-97	Utz, Sherman S.	Oldenburg	R.	7-29-97
Lewis, Rob't F.	Mt. Carmel	R.	*	West, J. F.	Brookville	R.	7-15-97
Linegar, Jno. M.	Fairfield	R.	8-11-97	Whitsitt, S. A.	Metamora	R.	8-9-97
Maguire, W. W.	Metamora	R.	7-31-97	Young, F. P.	Oldenburg	R.	*
Martin, LaFayette	Metamora	E.	12-1-97				

Regular, 24; Eclectic, 9. Total, 33.

Fulton County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Armstrong, A.	Kewanna	R.	7-24-97	Kuhn, Benj. F.	Rochester	R.	7-30-97
Bitters, F. P.	Rochester	R.	7-15-97	Loring, C. J.	Rochester	R.	7-17-97
Brown, Angus	Rochester	H.	8-5-97	McMahan, J. W.	Rochester	R.	1-26-97
Crosby, Wm. S.	Rochester	H.	8-12-97	Meek, L. C.	Tiosa	R.	7-23-97
Clymer, Newton J.	Rochester	E.	*	Morris, J. M.	Fulton	R.	7-19-97
Doke, John T.	Tiosa	R.	7-30-97	Overmeyer, B. F.	Leiter's Ford	R.	7-30-97
Fish, Sam'l R.	Bloomingsburg	E.	7-17-97	Rannells, J. N.	Rochester	E.	7-15-97
Gould, Vernon	Rochester	R.	7-26-97	Rhodes, E. E.	Rochester	R.	7-15-97
Gould, Chas. E.	Rochester	R.	8-10-97	Richards, Jno.	Fulton	R.	7-19-97
Gray, W. B.	Leiter's Ford	R.	*	Shafer, W. S.	Rochester	E.	7-27-97
Harter, C. F.	Akron	R.	10-12-97	Surgury, A. B.	Tiosa	R.	*
Heward, W. M.	Grass Creek	R.	*	Terry, Sam'l P.	Rochester	R.	7-17-97
Hill, Wm.	Rochester	E.	9-7-97	Walters, S. W.	Leiter's Ford	R.	7-17-97
Hosman, W. E.	Akron	E.	7-22-97	Ward, J. M.	Kewanna	R.	12-9-97
Howell, J. Q.	DeLong	E.	8-12-97	Washburn, Jno. M.	Kewanna	R.	9-21-97
Iorns, Jno. W.	Rochester	H.	*	Washburn, E. P.	Kewanna	R.	9-16-97
Johnston, Aaron	Akron	R.	7-30-97				

Regular, 23; Eclectic, 7; Homeopathic, 3. Total, 33.

Gibson County.

Anderson, R. S.	Princeton	R.	7-9-97	Keeley, F. H.	Owensville	R.	7-22-97
Ballard, John	Haubstadt	R.	7-16-97	Kendle, G. C.	Princeton	R.	7-16-97
Beresford, G. B.	Owensville	E.	7-16-97	Littlepage, G. C.	Haubstadt	R.	7-28-97
Blair, Franklin	Princeton	R.	7-17-97	Marchand, V. H.	Haubstadt	R.	9-1-97
Blair, Wm. W.	Princeton	R.	7-9-97	Mason, R. S.	Oakland City	R.	7-16-97
Brown, Thos. M.	Oakland City	R.	8-25-97	Maxam, F. H.	Princeton	R.	9-2-97
Burton, A. R.	Princeton	R.	7-15-97	McDonald, C. M.	Princeton	R.	*
Burton, Hiram	Somerville	R.	7-17-97	McGowan, J. W.	Oakland City	R.	7-16-97
Carter, C. S.	Oakland City	R.	*	Mitchell, R. S.	Princeton	R.	12-18-97
Carter, U. R.	Princeton	E.	*	Montgomery, T. J.	Owensville	R.	7-16-97
Clifford, A. C.	Oakland City	R.	8-17-97	Montgomery, M. A.	Owensville	R.	*
Duncan, Wm. B.	Patoka	R.	7-16-97	Moore, P. B.	Owensville	R.	7-27-97
Eads, E. E.	Oakland City	E.	7-19-97	Morris, J. L.	Haubstadt	R.	7-16-7
Ellis, Walter L.	Princeton	R.	9-4-97	Nelson, Frank	Hazleton	R.	8-5-97
French, W. W.	Fort Branch	R.	8-30-97	Null, C. L.	Somerville	R.	9-10-97
Genung, W. R.	Fort Branch	R.	*	Patton, J. C.	Francisco	R.	7-22-97
Goodwin, L. D.	Lloyd	R.	7-22-97	Renves, D. P.	Francisco	R.	7-28-97
Grayson, Thos. J.	Hazleton	R.	8-20-97	Ricketts, R. R.	Hazleton	E.	7-12-97
Gudgel, J. F.	Hazleton	R.	8-9-97	Runcie, John W.	Fort Branch	R.	7-18-97
Hammel, John	Buckskin	R.	7-18-97	Shelton, John W.	Somerville	R.	8-25-97
Hansford, W. G.	Oakland City	R.	7-27-97	Shoptough, S. H.	Princeton	R.	7-15-97
Hart, W. J. S.	Oakland City	R.	7-19-97	Stone, O. M.	Oakland City	R.	12-18-97
Higgins, R. G.	Princeton	H.	7-22-97	Strickland, Geo.	Francisco	R.	7-29-97
Holder, U. H.	Patoka	R.	7-18-97	Tarr, John W.	Lloyd	R.	*
Hollingsworth, M. P.	Princeton	R.	7-15-97	Thomas, C. M.	Haubstadt	R.	7-16-97
Hopkins, Wm. G.	Fort Branch	R.	8-4-97	Williams, Jno. M.	Owensville	E.	7-29-97
Hudson, O. L.	Princeton	H.	7-14-97	Williamson, S. J.	Fort Branch	E.	7-22-97
Ireland, J. M.	Francisco	R.	11-30-97	Williamson, W. T.	Hazleton	E.	12-2-97

Regular, 47; Eclectic, 7; Homeopathic, 2. Total, 56.

Grant County.

Adkins, J. D.	Marion	R.	7-9-97	Combs, Albert H.	Marion	R.	7-14-97
Alexander, W. P.	Gas City	E.	8-6-97	Conley, L. H.	Gas City	R.	8-24-97
Anderson, Jno. T.	Swayzee	E.	7-13-97	Corev, L. J.	Van Buren	R.	9-4-97
Anderson, Emma	Swayzee	PM.	7-13-97	Cronkhite, C. C.	Marion	R.	7-15-97
Aveline, F. H.	Marion	PM.	11-9-97	Crumrine, I. S. J.	Landess	R.	7-16-97
Barnes, Wm. C.	Marion	R.	7-17-97	Dale, Burnham C.	Na. Mil. Home	R.	8-12-97
Barnes, Robt A.	Marion	PM.	7-9-97	Daniels, Geo. W.	Sweetser	R.	7-19-97
Barnes, E. V.	Marion	PM.	7-9-97	Daniels, W. V.	Marion	E.	7-15-97
Bartley, R. W.	Marion	E.	7-16-97	Davis, S. H.	Marion	E.	7-23-97
Bennett, Carrie S.	Marion	E.	7-12-97	Davis, W. T.	Gas City	R.	10-21-97
Blake, Andrew	Marion	PM.	*	Dawson, C. F.	New Cumberland	E.	7-17-97
Bobbitt, W. H.	Marion	R.	10-18-97	Dooley, A. J.	Marion	R.	7-22-97
Bridge, L. M.	Van Buren	R.	*	Eckert, Chas. H.	Marion	R.	7-14-97
Brundige, S. P.	Marion	R.	*	Eshleman, L. H.	Marion	R.	8-2-97
Burge, A. D.	Marion	E.	9-20-97	Fankboner, W. A.	Marion	R.	7-21-97
Cartwright, M. L.	Marion	PM.	7-28-97	Fite, C. H.	Marion	PM.	7-26-97

Grant County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Flynn, Wm.	Marion	R.	7-15-97	Newton, C. N.	Marion	PM	7-23-97
Fornest, J. H.	Marion	NC	7-15-97	Nolder, S. M.	Fairmount	PM	7-27-97
Fowler, A. A.	Marion	H.	11-11-97	Olds, Wm. E.	Marion	E	11-15-97
Francis, W. R.	Marion	H.	7-19-97	Overman, C. J.	Marion	R	7-16-97
Fraze, Emmett	Gas City	PM	8-20-97	Parrett, H. M.	Swayzee	R	11-23-97
Goodwin, E. B.	Marion	R	*	Patterson, J. W.	Fairmount	R	*
Haines, H. C.	Sims	PM	10-5-97	Powell, Nellie B.	Marion	R	7-26-97
Hamilton, A. A.	Marion	R	7-21-97	Powell, A. E.	Marion	R	7-26-97
Hatfield, Wm. A.	Marion	PM	8-14-97	Powell, Jno. F.	Marion	R	9-2-97
Hawn, Maria	Marion	PM	12-6-97	Pownall, Emma	Roseburg	PM	8-5-97
Hawkins, Z. T.	Swayzee	E	8-30-97	Pretlow, C. L.	Fairmount	R	11-27-97
Henley, Alphonse	Fairmont	NC	9-18-97	Preston, C. M.	Marion	E	*
Hibbard, F. M.	Marion	E	7-15-97	Priest, Frank A.	Marion	H	*
Hockett, C. P.	Jonesboro	E	7-16-97	Reasoner, Wm. I.	Point Isabel	R	7-16-97
Holliday, D. A.	Fairmount	R	9-28-97	Seal, I. N.	Hackleman	R	8-3-97
Hollis, Wm. A.	Marion	PM	8-2-97	Searight, H. W.	Upland	R	*
Hollis, Saml.	Upland	R	7-27-97	Shananhan, A. A.	Jalapa	PM	11-2-97
Horne, S. S.	Jonesboro	R	8-4-97	Shively, M. T.	Marion	R	7-14-97
Hough, Wm. A.	Marion	PM	8-2-97	Siddons, J. O.	Marion	R	7-16-97
Houser, Jas. A.	Marion	PM	7-16-97	Snodgrass, D. B.	Marion	PM	7-16-97
Johnson, J. E.	Marion	E	9-30-97	Snodgrass, Mary J.	Marion	PM	7-16-97
Jones, E. P.	Marion	H	7-19-97	Stephens, Anna T.	Marion	PM	8-7-97
Jones, C. R.	Jonesboro	E	7-26-97	Tevenson, Geo.	Marion	PM	9-11-97
Keene, D. P.	Marion	R	11-17-97	Tomner, J. J.	Marion	NC	8-4-97
Kersey, J. B.	Marion	PM	7-20-97	Tomner, Geo. D.	Marion	H	*
Kimball, A. D.	Na. Mill. Home	R	8-4-97	Tout, O. J.	Upland	R	7-15-97
Kimball, C. D.	Marion	R	7-30-97	Tudley, Jos. W.	Marion	R	7-27-97
Kimball, T. C.	Marion	R	7-19-97	Tutman, H. A.	Marion	PM	9-22-97
Knight, J. C.	Jonesboro	R	7-22-97	Thomas, Wm. T.	Marion	PM	7-17-97
Kyle, Jno. J.	Marion	R	*	Thomas, Elvira R.	Marion	PM	7-17-97
Landess, Geo. A.	Van Buren	R	7-21-97	Trimble, Dorius	Jalapa	PM	8-13-97
Langston, Edgar	Point Isabel	R	8-6-97	Vance, C. E.	Gas City	R	7-19-97
Lord, J. Levi	Marion	R	8-6-97	Votaw, Mrs. R. A.	Marion	PM	9-27-97
Ludlum, Benj. F.	Marion	R	8-17-97	Wall, M. M.	Marion	H	9-9-97
Lyon, Thos.	Upland	R	8-13-97	Warner, W. M.	Marion	H	9-9-97
McKay, Jas. D.	Gas City	R	7-27-97	White, Dan L.	Matthews	E	7-20-97
McKinney, W. M.	Marion	PM	9-27-97	White, Eli M.	Jonesboro	R	8-5-97
Mendenhall, O. A.	Sweetser	R	9-4-97	Whitson, Jno. S.	Jonesboro	R	7-15-97
Mock, J. D.	Marion	R	7-19-97	Williams, Lewis	Marion	E	7-19-97
Mock, A. D.	Marion	R	7-19-97	Williams, D. A.	Marion	E	9-16-97
Moon, Allen	Fairmount	PM	7-14-97	Williamson, P. E.	Sweetser	R	7-23-97
Morris, O. W.	Marion	PM	7-23-97	Wilson, Jno. E.	Point Isabel	R	*
Munsee, Lola	Marion	PM	*				

Regular, 63; Eclectic, 17; Homeopathic, 6; Physio-Medical, 30; not classed, 3. Total, 119.

Greene County.

Acton, W. G.	Switz City	R.	7-20-97	Leavitt, H. B.	Worthington	R.	7-19-97
Allen, T. J.	Owensburg	R.	7-31-97	Little, H. A.	Linton	R.	7-15-97
Aydelotte, Thos.	Worthington	NC	7-21-97	Lowder, H. R.	Bloomfield	R.	7-15-97
Beaty, Wm. H.	Worthington	R.	7-29-97	McKissick, D. P.	Linton	R.	*
Berna, P. C., Jr.	Linton	R.	10-8-97	Mullane, Jos.	Lyons	R.	7-16-97
Bridwell, LaF.	Owensburg	R.	7-19-97	Norvell, H. V.	Bloomfield	R.	8-7-97
Burge, N. C.	Park	R.	8-7-97	Olipphant, P. T.	Hobbierville	E	9-17-97
Burke, Wm. H.	Scotland	R.	8-23-97	Reese, G. B. Mc.	Koleen	R.	8-7-97
Cole, W. H.	Switz City	R.	9-3-97	Rose, B. A.	Linton	R.	8-12-97
Cook, Peter M.	Sofsberry	R.	7-28-97	Selfridge, Wm. T.	Jasonville	R.	9-2-97
Cravens, S. C.	Bloomfield	R.	7-15-97	Selfridge, Wm. R.	Worthington	R.	9-2-97
Cravens, W. R.	Bloomfield	R.	7-15-97	Sherwood, E. T.	Linton	R.	8-18-97
Cravens, E. R.	Markle	R.	9-8-97	Sherwood, B. M.	Newberry	R.	8-18-97
Dearmin, John	Worthington	E	7-19-97	Shirts, Elmer	Lyons	R.	7-15-97
Durment, C. R.	Newberry	R.	8-12-97	Simons, James S.	Lyons	R.	7-20-97
Gray, Jno. W.	Bloomfield	R.	7-15-97	Spears, A. H.	Switz City	R.	12-1-97
Gray, Simeon	Worthington	R.	10-23-97	Squire, Wm. B.	Worthington	E	7-19-97
Hannan, Jno. W.	Scotland	R.	8-24-97	Talbott, J. E.	Linton	R.	8-17-97
Harrah, Jno. M.	Switz City	R.	8-16-97	Thomas, G. A.	Linton	R.	8-27-97
Helming, H.	Linton	H	9-1-97	Turner, Geo. W.	Newark	R.	*
Herold, Henry	Switz City	E	9-20-97	Walters, Wm. R.	Huffville	E	8-16-97
Harold, C. E.	Switz City	R.	9-20-97	Wheeler, Thos. J.	Bloomfield	R.	10-25-97
Kessinger, Wm. E.	Worthington	R.	7-20-97	Young, J. B.	Newark	R.	9-27-97
Lameroux, S. T.	Worthington	R.	9-4-97				

Regular, 40; Eclectic, 5; Homeopathic, 1; not classed, 1. Total, 47.

Hamilton County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Aldred, Jno. A.	Hortonville	R.	7-12-97	Lamb, Enoch	Fortville	R.	8-7-97
Allen, Wm. P.	Eagletown	PM.	10-6-97	Loehr, E. C.	Noblesville	R.	7-15-97
Andrews, V. E.	Cicero	R.	7-14-97	Lyle, A. W. T.	Fisher's Sw ch	R.	7-24-97
Applegate, A. J.	Eagletown	R.	7-12-97	Mallott, Wm.	Cicero	R.	10-28-97
Axline, J. A.	Noblesville	R.	7-9-97	McFatrige, L. C.	Atlanta	R.	9-9-97
Baldwin, L. J.	Westfield	R.	*	McMurtry, T. J.	Boxley	R.	7-12-97
Barlow, P. A.	Noblesville	R.	12-20-97	Mendenhall, A. B.	Cicero	R.	7-16-97
Booth, A. D.	Noblesville	R.	7-15-97	Miesse, Adam	Noblesville	R.	7-12-97
Byers, J. S.	Noblesville	PM.	7-15-97	Miller, H. D.	Atlanta	R.	10-19-97
Camp, W. E.	Clarksville	R.	8-16-97	Millikan, H. M.	Sheridan	PM.	7-1-97
Carney, Frank W.	Sheridan	R.	11-27-97	Murphy, J. M.	Arcadia	R.	7-30-97
Coffin, B. F.	Westfield	PM.	8-20-97	Newby, Jno. C.	Sheridan	R.	9-11-97
Cook, C. W.	Carmel	PM.	8-7-97	Parr, T. E.	Jolietville	R.	7-23-97
Cooper, W. E.	Sheridan	R.	7-10-97	Parr, J. N.	Jolietville	R.	7-23-97
Cottingham, C. E.	Noblesville	R.	7-14-97	Penn, R. L.	Deming	R.	7-23-97
Davenport, H. E.	Sheridan	R.	7-15-97	Pettijohn, O. B.	Noblesville	R.	7-17-97
Davenport, I. W.	Sheridan	R.	7-15-97	Ray, C. C.	Arcadia	R.	*
Dove, S. C.	Westfield	R.	7-26-97	Ross, L. H.	Ekin	E.	8-20-97
Fancher, J. W.	Sheridan	R.	7-16-97	St. Clair, J. W.	Noblesville	R.	7-14-97
Fordrea, Zeri H.	Westfield	R.	7-16-97	Shilt, J. S.	Cicero	E.	7-14-97
Gentle, Luke M.	Noblesville	R.	9-22-97	Smith, T. J.	Noblesville	R.	7-15-97
Graham, W. B.	Noblesville	R.	7-26-97	Smith, H. B.	Olio	R.	7-16-97
Harold, N. E.	Westfield	PM.	7-19-97	Stout, H. H.	Cicero	R.	7-16-97
Harold, N. G.	Carmel	R.	*	Teter, Geo. W.	Boxley	PM.	8-7-97
Harrell, Sam'l	Noblesville	H.	7-19-97	Tomlinson, C. H.	Cicero	R.	7-15-97
Hawarth, M. C.	Noblesville	R.	7-27-97	Tucker, A. R.	Noblesville	R.	7-12-97
Heath, J. P.	Fisher's Sw ch	R.	7-19-97	Tucker, Fred A.	Noblesville	R.	7-24-97
Hershey, K. C.	Carmel	R.	10-21-97	Utz, Henry C.	Atlanta	R.	9-7-97
Hershey, F. C.	Carmel	R.	10-21-97	Vance, U. G.	Cicero	E.	7-16-97
Hicks, J. L.	Arcadia	R.	7-16-97	Warford, F. M.	Cicero	R.	7-16-97
Hunt, Gideon	Westfield	R.	7-15-97	Wheeler, M. M.	Noblesville	E.	7-14-97
Johnson, M. S.	Ekin	R.	*	Wilmoth, C. S.	Noblesville	E.	7-12-97

Regular, 51; Eclectic, 5; Homeopathic, 1; Physio-Medical, 7. Total, 64.

Hancock County.

Adams, M. M.	Greenfield	R.	7-9-97	Hunt, A. T.	Westland	PM.	7-16-97
Andrews, Jos. O.	Blue River	R.	7-26-97	Johnson, W. R.	Charlottesville	R.	7-26-97
Barnes, Chas. A.	Greenfield	R.	7-7-97	Julien, Jas. P.	Wilkinson	PM.	7-21-97
Bell, Jno. S.	Philadelphia	R.	7-19-97	Justice, Wm. A.	Eden	R.	7-24-97
Black, Jno. P.	Greenfield	R.	7-14-97	Justice, Jno. H.	Greenfield	R.	7-27-97
Bogart, H. J.	Greenfield	R.	7-14-97	King, W. R.	Greenfield	R.	7-15-97
Boots, S. S.	Greenfield	E.	*	Kirkhoff, C. H.	N. Palestine	R.	7-15-97
Bruner, C. K.	Greenfield	R.	7-23-97	Larimore, J. M.	Greenfield	R.	7-15-97
Bruner, Mary L.	Greenfield	R.	7-23-97	Lockhead, J. M.	Greenfield	H.	7-15-97
Collins, Oliver A.	Mohawk	R.	7-24-97	Lummis, J. E.	Maxwell	R.	7-28-97
Comstock, Jas.	Greenfield	R.	10-1-97	McCord, C. E.	Fortville	R.	7-27-97
Conrad, Ernest M.	Maxwell	R.	*	Morgan, R. R.	McCordsville	R.	7-15-97
Cook, Benj. H.	Wilkinson	R.	7-29-97	Neier, O. C.	N. Palestine	R.	7-17-97
Corey, Jno. D.	McCordsville	R.	7-20-97	Oaldon, W. C.	Willow	R.	*
Cox, Wm. B.	Charlottesville	E.	7-23-97	Pratt, C. C.	Willow	R.	9-6-97
Cummins, Jas. L.	Mt. Comfort	PM.	7-9-97	Ramsey, R. B.	Greenfield	E.	7-30-97
Dailey, Geo. W.	Charlottesville	E.	8-28-97	Selman, Jno. W.	Greenfield	R.	7-14-97
Ely, L. C.	N. Palestine	R.	7-15-97	Smith, Edgar	Carrollton	E.	7-21-97
Ely, J. M.	N. Palestine	R.	7-15-97	Stuart, A. A.	Fortville	R.	8-5-97
Fuller, Wm.	Philadelphia	R.	7-15-97	Stuart, Jno. G.	Fortville	R.	8-2-97
Griffin, L. B.	Greenfield	R.	7-24-97	Thompson, G. W.	Greenfield	R.	*
Heller, Oscar	Greenfield	R.	7-21-97	Titus, Chas.	Warrington	R.	11-18-97
Hervey, T. P.	McCordsville	NC.	8-11-97	Troy, Sam'l A.	Milner Corner	R.	7-21-97
Hervey, S. W.	Fortville	R.	*	Wilson, Ralph	Shirley	R.	12-28-97
Howard, N. P.	Greenfield	R.	7-14-97	Yencey, S. T.	Fortville	R.	8-5-97

Regular, 40; Eclectic, 5; Homeopathic, 1; Physio-Medical, 3; not classed, 1. Total, 50.

Harrison County.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Best, Daniel	Mauckport	E	7-22-97	Jones, A. M.	Corydon	R	*
Bird, Jos. E.	Crandall	R	8-26-97	LaFollette, W. P.	New Salisbury	R	7-22-97
Boston, C. H.	Beesford	PM	9-22-97	Lawson, John E.	Corydon	R	7-27-97
Botterff, J. C.	Corydon	R	7-9-97	Marshall, D. J.	N. Middletown	R	7-21-97
Daniel, Wm.	Corydon	R	7-14-97	Martin, Geo. F.	Corydon	R	7-17-97
Davis, Wm. H.	N. Middletown	R	7-24-97	Nitchem, L.	Crisp C. Roads	R	10-18-97
Deen, H. K.	Central	R	8-2-97	Moore, Wm.	Elizabeth	R	7-22-97
Deen, Wm. R.	Mauckport	R	8-30-97	Neely, I. L.	Corydon	R	9-28-97
Finley, John F.	Palmyra	R	8-26-97	Ralston, A. H.	Lanesville	R	*
Forbis, Burrel F.	Laconia	R	7-31-97	Sigler, R. R.	Ramsey	R	7-6-97
Foust, David C.	New Salisbury	R	9-6-97	Swarens, J. F.	DePauw	R	7-28-97
Funk, Z. T.	Corydon	R	9-10-97	Winders, L. C.	Elizabeth	R	7-22-97
Hays, Daniel W.	Valley City	R	7-15-97	Wolfe, L. O. P.	Mauckport	R	7-23-97
Hopper, I. J.	Milltown	PM	7-24-97	Wolfe, Z. C.	Lanesville	R	7-31-97
Horner, J. A.	Hancock	R	7-15-97	Wolfe, F. E.	Lanesville	R	12-17-97
Hurst, S. H.	Laconia	R	7-22-97	Wolpert, W. I.	Elizabeth	R	7-29-97

Regular, 29; Eclectic, 1; Physio-Medical, 2. Total, 32.

Hendricks County.

Adams, Thos. J.	North Salem	R	9-2-97	Lawson, W. T.	Danville	R	7-20-97
Barker, Joel T.	Danville	R	7-12-97	Leak, S. O.	Lizton	R	10-16-97
Brent, Newton	Pittsboro	R	7-23-97	Lowder, Cyrus	Danville	R	9-6-97
Bridges, A. P. W.	Plainfield	R	7-30-97	Marsh, Jno. L.	Brownburg	R	7-23-97
Carter, Amos	Plainfield	R	7-21-97	Martin, W. N. G.	Brownburg	R	7-19-97
Cope, Jas. P.	Bridgeport	R	7-16-97	Martin, Simeon	North Salem	R	7-20-97
Davidson, A. W.	Brownburg	R	7-20-97	Masters, N. G.	Stilesville	R	*
Doan, Jas. M.	Clayton	R	7-20-97	O'Brien, W. M.	Stilesville	R	7-19-97
Farabee, C. E.	Danville	R	7-22-97	Osborne, Jno. A.	New Winchester	R	7-21-97
French, Jno. S.	Pittsboro	R	8-11-97	Reagan, J. S.	Plainfield	R	7-20-97
Gilbert, A. K.	Clayton	R	10-6-97	Reagan, Jesse	Plainfield	R	8-4-97
Grimes, Jas. B.	North Salem	R	8-24-97	Seaton, Guy	Clayton	R	*
Harold, D. H.	Plainfield	PM	8-2-97	Seaton, G. W.	Clayton	R	9-7-97
Hatfield, Wm. J.	Pittsboro	R	7-21-97	Sinclair, I. P.	North Salem	R	9-6-97
Heavenridge, A.	Stilesville	R	7-19-97	Sowder, Chas. R.	Avon	R	*
Hoadley, W. J.	Danville	R	9-9-97	Smith, Thos. G.	Brownburg	R	8-6-97
Hope, C. F.	Coatesville	R	7-15-97	Strong, Ara M.	Belleville	R	9-28-97
Huron, F. H.	Danville	H	7-16-97	Summers, H. C.	Omo	R	9-6-97
Hunt, Stephen	Coatesville	R	8-6-97	Swope, A. A.	Stilesville	R	*
Hunt, T.	Plainfield	R	7-20-97	White, Chas. A.	Danville	R	7-15-97
Jessup, Mary A.	Friendswood	R	8-26-97	White, W. H.	Omo	R	10-19-97
Johnson, O. B.	Lizton	R	9-28-97	Williams, Luther	Belleville	R	8-11-97

Regular, 42; Homeopathic, 1; Physio-Medical, 1. Total, 44.

Henry County.

Andrews, Geo. R.	Mt. Summit	R	7-27-97	Eard, R. B.	Mooreland	R	7-26-97
Bailey, Geo. D.	Spiceland	R	12-28-97	Englerth, J. T.	Honey Creek	PM	7-20-97
Barrett, O. H.	Knightstown	R	7-29-97	Estabrook, L. W.	Springport	R	7-21-97
Bartlett, C. O.	Lewisville	R	8-12-97	Farris, Edgar S.	New Castle	R	7-14-97
Bartlett, A. C.	New Castle	R	7-14-97	Farris, Samuel	New Castle	R	7-14-97
Benedict, Hanf.	Springport	R	7-17-97	Fleener, Otto F.	Knightstown	R	*
Benjamin, A. M.	Dunreith	R	7-22-97	Garrett, O. H.	Cadiz	R	7-21-97
Brubaker, E. H.	New Castle	PM	7-14-97	Goodwin, E. W.	Mt. Summit	NC	11-4-97
Burke, G. W.	New Castle	R	7-23-97	Graf, O. O.	Knightstown	R	*
Cress, Jno. B.	Knightstown	R	7-29-97	Greist, Henry W.	Kennard	R	7-16-97
Crouse, Henry	Knightstown	R	7-22-97	Griffin, Robert	Middletown	R	12-28-97
Drake, F. J.	Knightstown	R	7-29-97	Gronendyke, T. W.	New Castle	R	7-14-97

Henry County—Continued.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Gronendyke, O. J.	New Castle	R.	7-17-97	Rea, John	South Elm	R.	7-15-97
Guyer, O. K.	Lewisville	R.	8-13-97	Rogers, Samuel G.	New Castle	E.	7-16-97
Hardesty, J. C.	Millville	R.	7-17-97	Seward, C. P.	Greensboro	E.	8-27-97
Hess, F. C.	Cadiz	R.	7-15-97	Smith, Robert A.	Greensboro	PM.	7-20-97
Hetsler, O. I.	Blountsville	E.	7-21-97	Smith, Geo. H.	Greensboro	PM.	*
Hobbs, O. W.	Ogden	R.	7-26-97	Spitler, C. S.	Mooreland	R.	8- 9-97
Hollingsworth, J. R.	Lewisville	R.	9- 6-97	Stafford, Jas. A.	Millville	PM.	7-27-97
Holloway, Lizzie E.	Spiceland	H.	9-27-97	Stafford, Horace	Stratghn	PM.	7-27-97
Holloway, O. E.	Knightstown	R.	9-30-97	Stafford, D. H.	New Castle	PM.	*
Homer, R. H.	Knightst'n	NC	7-29-97	Stanley, J. C.	Ogden	R.	7-31-97
Johnson, E. M.	Knightstown	R.	7-29-97	Stoute, Chas. M.	Middletown	PM.	8-23-97
Johnson, J. J.	New Castle	R.	7-31-97	Street, Rebecca	Spiceland	PM.	8-20-97
Kirk, E. E.	Spiceland	R.	7-21-97	Summers, O. R.	Middletown	R.	12-31-97
Kissel, Wm.	New Castle	R.	7-16-97	Thornburg, F. L.	Middletown	R.	12-14-97
Koons, H. H.	New Lisbon	R.	9- 2-97	Thrkmorten, O. E.	Kennard	R.	8-12-97
McGavran, Wm. B.	Knightstown	R.	7-29-97	VanMetre, C. E.	New Castle	R.	7-21-97
McKillop, Jos. H.	Snyder	R.	8-19-97	Wallage, G. W.	Middletown	R.	8-19-97
McSherry, J. L.	Sulphur Sp'gs	R.	7-22-97	Waters, S. C.	Middletown	R.	8-12-97
Mendenhall, E. T.	New Castle	R.	7-15-97	Wayman, J. C.	New Castle	PM.	7-16-97
Painter, B. H.	Middletown	PM.	10-14-97	Weeks, Jos.	Mechanicsb	PM.	8- 2-97
Pendleton, C. B.	Mechanicsb	PM.	9- 9-97	Weeks, Elizab. J.	Mechanicsb	PM.	8- 2-97
Pickering, S. P.	New Lisbon	R.	8- 4-97	Winston, L. V.	Knightstown	R.	7-23-97
Pierce, J. E.	Middletown	R.	8-12-97	Yockey, D. H.	Blountsville	R.	10-26-97
Post, B. O.	Sulphur Sp'gs	R.	7-28-97				

Regular, 51; Eclectic, 3; Homeopathic, 1; Physio-Medical, 14; not classed, 2. Total, 71.

Howard County.

Barnett, David C.	Kokomo	E.	7-12-97	Maughmer, G. C.	Kokomo	R.	7-15-97
Bates, A. J.	Kokomo	R.	7-14-97	McClurg, W. H.	Kokomo	R.	9- 3-97
Berest, J. H.	Kokomo	R.	9-27-97	Miller, H. C.	Greentown	R.	9- 3-97
Buck, Wm. H.	Kokomo	H.	9-25-97	Miller, C. C.	Alto	R.	7-29-97
Buroker, J. P.	Sycamore	E.	7-19-97	Moore, Emma W.	Kokomo	R.	8- 5-97
Collier, Susan E.	Kokomo	HT.	7-28-97	Moore, John B.	Kokomo	R.	9-18-97
Cook, J. M.	Russiaville	E.	9- 9-97	Morris, O. M.	Shanghai	R.	9-21-97
Cooper, I. A.	Ridgeway	E.	8-28-97	Moulder, J. M.	Kokomo	R.	7-14-97
Cooper, Wm. B.	Kokomo	R.	7-24-97	Murray, S. T.	Greentown	R.	7-30-97
Cooper, Wm.	Kokomo	E.	7-14-97	Newlin, Wm. H.	New London	E.	7-24-97
Cosman, A. J.	Kokomo	PM.	9-18-97	Newlin, S. N.	Russiaville	E.	7-29-97
Covalt, A. A.	Greentown	R.	7-28-97	Norris, W. N.	Kokomo	R.	7-26-97
Cox, Edgar	Kokomo	R.	7-19-97	Ogle, H.	Kokomo	B.	7-15-97
Deweese, Leander	Hemlock	R.	7-15-97	Oiler, M. L.	Russiaville	R.	7-27-97
Evans, John M.	Kokomo	H.	7-21-97	Parry, M. A.	Kokomo	R.	7-15-97
Flora, J. S.	Russiaville	E.	9-16-97	Peters, D. C.	Greentown	R.	7-31-97
Friermoon, E. K.	Greentown	R.	7-21-97	Powell, E. U.	Greentown	R.	*
Garr, J. D.	W. Middleton	E.	8-12-97	Puckett, John L.	Kokomo	R.	7-15-97
Garr, James O.	Kokomo	R.	9-29-97	Rayburn, I. W.	Kokomo	R.	7-15-97
Gifford, T. Z.	Kokomo	HT.	*	Rice, E. C.	Oakford	E.	8-28-97
Gordon, Wm. S.	Plevna	E.	10- 1-97	Ross, John H.	Kokomo	R.	8- 4-97
Hall, James F.	Kokomo	R.	8-28-97	Ross, W. H.	Kokomo	R.	8-18-97
Harrison, Wm.	Kokomo	R.	9-22-97	Ross, Robert H.	Cassville	R.	7-17-97
Holcome, A. W.	Kokomo	H.	7-16-97	Scott, G. B.	Greentown	R.	7-23-97
Hull, W. H.	Centre	R.	9- 7-97	Scott, James W.	Kokomo	R.	7- 7-97
Hunter, T. C.	Kokomo	H.	7-16-97	Simmons, L. A.	Kokomo	R.	7-16-97
Jackson, Rose B.	Kokomo	HT.	*	Smith, R. H.	Kokomo	R.	7-14-97
Kemp, G. W.	Russiaville	R.	*	Thorne, J. C. F.	Kokomo	R.	7-15-97
Kern, L.	Kokomo	R.	8- 4-97	Ware, C. M.	West Liberty	R.	8- 2-97
Kneppel, LeMarr	Kokomo	R.	9- 9-97	Watkins, Geo. T.	Kokomo	PM.	7-17-97
Kirkpatrick, J. B.	Kokomo	R.	9- 3-97	Weed, C. W.	Kokomo	B.	7-17-97
Martin, Amos A.	Ridgeway	R.	8- 5-97	Wright, J. W.	Kokomo	R.	9- 4-97
Martin, W. H.	Kokomo	R.	7-14-97	Young, Ella	Kokomo	HT.	*

Regular, 43; Eclectic, 11; Homeopathic, 4; Physio-Medical, 2; Hygeia Therapeutic, 4; Botanic, 2. Total, 66.

Huntington County.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Beaver, H. M.	Huntington	R.	*	Lewis, M. J.	Mt. Etna	NC.	9- 3-97
Beck, W. R.	Huntington	R.	*	Loughbridge, J. T.	River	R.	7-17-97
Biggerstaff, J. T.	Bippus	R.	7- 9-97	Lyman, D. S.	Huntington	NC.	*
Bonifield, Wm. D.	Warren	R.	7-28-97	Lyons, W. B.	Huntington	R.	8-18-97
Buckner, J. C.	Andrews	R.	7-21-97	McLairne, H. K.	Huntington	R.	10-30-97
Burns, A. M.	Bippus	R.	8- 5-97	McLin, Geo. H.	Huntington	H.	7-17-97
Carson, Wm. F.	Huntington	R.	7-24-97	Mitchell, S. P.	Mt. Etna	R.	7-24-97
Chaffee, Wm. C.	Huntington	R.	8- 5-97	Morgan, F. B.	Toledo	R.	6-26-97
Chenoweth, G. P.	Huntington	R.	7-15-97	Murray, L. E.	Huntington	R.	7-15-97
Cory, H. W.	Huntington	R.	7-14-97	Palmer, E. M.	Huntington	R.	7-16-97
Crandel, Thos.	Majenica	E.	7-13-97	Scott, N. W.	Huntington	R.	7-16-97
Edington, B. F.	Plum Tree	PM.	7-20-97	Searles, J. D.	Huntington	R.	7-26-97
Frost, R. F.	Huntington	R.	7-15-97	Shaffer, A. H.	Huntington	R.	7-14-97
Gemmill, H. C.	Markle	R.	7-26-97	Shaffer, E. W.	Huntington	E.	12- 6-97
Good, Chas. H.	Warren	R.	8- 2-97	Shipley, J. B.	Goblesville	PM.	7-19-97
Gordon, Baltzer L.	Bippus	E.	8- 4-97	Smith, W. F.	Bracken	E.	7-26-97
Grayston, F. S. B.	Huntington	R.	7-15-97	Sprowl, Jno. S.	Warren	R.	*
Grayston, B. H. B.	Huntington	R.	7-16-97	Sutton, S. F.	Huntington	H.	9-17-97
Grayston, Fred. W.	Huntington	R.	7-16-97	Sutton, B. A.	Huntington	R.	7-15-97
Grayston, Chas. E.	Huntington	R.	9-20-97	Wall, F. M.	Warren	R.	8- 4-97
Gregg, E. H.	Banquo	R.	8-17-97	Wells, H. O.	Andrews	R.	7-15-97
Hicks, Jas. M.	Huntington	H.	7-22-97	Williams, O. B.	Andrews	R.	7-21-97
Howland, Morton	Majenica	R.	7-27-97	Wright, Shelby	Bracken	R.	9-25-97
Kemp, J. W.	Roanoke	R.	9-22-97	Wright, Ervin	Huntington	R.	9- 7-97
Kilander, W. J.	Markle	NC.	7-17-97	Wright, C. L.	Huntington	R.	8-26-97
King, J. R.	Roanoke	R.	8-25-97	Yingling, Dan'l	Huntington	E.	7-20-97
Koontz, S.	Roanoke	R.	*	Zimmerman, E.	Markle	R.	*
Layman, H. E.	Warren	R.	10- 8-97				

Regular, 42; Eclectic, 5; Homeopathic, 3; Physio-Medical, 2; not classed, 3. Total, 55.

Jackson County.

Applegate, Geo.	Crothersville	R.	*	McCormick, L. R.	Crothersville	R.	12-24-97
Bard, Thomas S.	Marling	R.	8- 2-97	McMillan, J. P.	Medora	R.	7-26-97
Barnes, Geo. O.	Cortland	R.	7-14-97	Monroe, V. H.	Seymour	R.	8-20-97
Barnett, O.	Tampico	R.	11-16-97	Orvis, G. Q.	Seymour	R.	7-20-97
Butts, H. P.	Crothersville	R.	12-30-97	Osterman, A. T.	Dudleytown	R.	8- 6-97
Casey, W. M.	Seymour	R.	7-23-97	Patrick, C. E.	Seymour	R.	*
Chute, Geo. H.	Freetown	PM.	7-23-97	Richards, T. J.	Mooney	R.	8-16-97
Converse, E. A.	Brownstown	E.	7-14-97	Ritter, J. K.	Brownstown	R.	7-19-97
Cummings, H. A.	Clear Springs	R.	7-28-97	Ruddick, L.	Seymour	R.	8- 6-97
Cummings, D. J.	Houston	R.	8-16-97	Shields, J. M.	Seymour	R.	7-23-97
Drybrough, A.	Crothersville	PM.	12-27-97	Shipman, N. N.	Seymour	R.	*
Ewing, F. M.	Vallonia	R.	*	Shuey, Geo. E.	Medora	R.	7-19-97
Galbraith, T. S.	Seymour	R.	7-30-97	Tinck, E. T.	Freetown	R.	8-12-97
Gerrish, M. F.	Seymour	R.	8- 6-97	Veasey, A. M.	Medora	R.	12-23-97
Gibson, Geo. W.	Houston	R.	9- 7-97	Vermilya, J. C.	Medora	R.	*
Graessle, Geo. G.	Seymour	R.	7-23-97	Warner, Wm. H.	Crothersville	R.	8-25-97
Green, Wm. O.	Dudleytown	R.	9- 6-97	Whitehead, W. E.	Brownstown	R.	7-15-97
Green, J. H.	Seymour	R.	9- 9-97	Whitted, F. F.	Cortland	E.	8- 5-97
Hill, L. B.	Seymour	R.	7-23-97	Wilson, C. L.	Brownstown	R.	7-15-97
Hunter, C. A.	Reddington	PM.	8- 4-97	Wilson, M. V.	Medora	R.	7-23-97
Kyte, H. R.	Seymour	PM.	8- 9-97	Yost, H. E.	Vallonia	R.	*
May, Albert	Crothersville	R.	9-22-97	Zaring, P. A.	Tampico	R.	7-16-97

Regular, 38; Eclectic, 2; Physio-Medical, 4. Total, 44.

Jasper County.

Atler, Moses B.	Rensselaer	R.	7-31-97	Moore, Silas H.	Rensselaer	R.	7-24-97
Berkley, A. L.	Rensselaer	R.	7-31-97	Pothinsje, P. J.	Remington	R.	11- 3-97
English, E. C.	Rensselaer	R.	7- 9-97	Powell, C. E.	Rensselaer	R.	*
Hartsell, W. W.	Rensselaer	H.	7-14-97	Schweir, W. C.	Wheatfield	R.	7-28-97
Johnson, Silas C.	Rensselaer	R.	*	Washburn, I. B.	Rensselaer	R.	7-23-97
Jones, C. V.	Kniman	R.	*	Wells, L. N.	DeMotte	R.	10-27-97
Landon, Hannibal	Remington	R.	7-20-97				

Regular, 12; Homeopathic, 1. Total, 13.

Jay County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Adams, J. H. B.	Portland	R.	7-30-97	Mills, C. C.	Redkey	R.	7-15-97
Arthus, C. S.	Portland	R.	7-30-97	Mincks, F. W.	Portland	H.	7-15-97
Blackledge, A. J.	Pennville	E.	7-15-97	Morehouse, J. A.	Portland	PM.	7-24-97
Blackledge, L. N.	Pennville	NC.	7-15-97	Moyer, F. E.	Pennville	R.	8-19-97
Bosworth, J. M.	Pennville	R.	*	Munsey, S. E.	N'w Mt. Pleasant	R.	7-15-97
Bramlage, Clem.	New Corydon	R.	9-4-97	Murray, D. P.	Dunkirk	R.	7-23-97
Brokaw, R. E.	Portland	R.	11-22-97	Patton, J. T.	Salem	R.	*
Brown, H. V.	Portland	R.	7-31-97	Perry, Geo. L.	Portland	R.	6-24-97
Caylor, C. E.	Pennville	R.	8-13-97	Pierce, J. S.	Redkey	PM.	7-23-97
Chew, Wm. A.	Salamonia	NC.	7-29-97	Poling, Sam'l K.	Portland	E.	7-17-97
Clevinger, Benj. J.	Redkey	R.	8-31-97	Ralston, Augustus	New Corydon	R.	9-23-97
Conner, Norris F.	Redkey	E.	7-23-97	Rarick, I. N.	Bluff Point	PM.	7-24-97
Davis, R. P.	Portland	R.	7-16-97	Ross, Jno. G.	Portland	E.	7-16-97
Dickes, Jno. T.	Portland	R.	7-16-97	Saunders, Joel E.	Pennville	PM.	8-20-97
Fertich, G. W.	Dunkirk	R.	9-9-97	Saunders, C. B.	Pennville	E.	8-9-97
Garber, J. B.	Dunkirk	R.	7-23-97	Schirack, Jno. W.	Corydon	R.	*
Glentzer, M. A.	Briant	E.	7-19-97	Selvey, Sam'l S.	Dunkirk	R.	9-4-97
Guy, Samuel D.	Briant	E.	8-16-97	Shepherd, Geo. W.	Redkey	R.	7-23-97
Hall, Willis M.	Westchester	R.	8-9-97	Sims, I. G.	Portland	R.	7-30-97
Hall, Jno. W.	Portland	R.	7-14-97	Skinner, D. F.	Salamonia	E.	7-26-97
Horn, Wm. C.	Pennville	R.	11-4-97	Stanton, D. S.	Portland	R.	8-16-97
Hutchinson, J. A.	Salamonia	R.	*	Stiers, F. R.	Redkey	E.	7-23-97
Jay, M. T.	Portland	R.	7-19-97	Swartz, Wm. W.	Balbee	PM.	7-20-97
Kidder, J. J.	Salamonia	E.	7-19-97	Swartz, Wm. D.	Portland	R.	11-12-97
Kidder, J. F.	N'w Mt. Pleasant	R.	7-16-97	Thomas, E. O.	Redkey	PM.	8-6-97
Kinsey, D. S.	Portland	R.	7-24-97	Thomas, E. Rosa.	Redkey	PM.	7-23-97
Lytle, Jno. S.	Dunkirk	R.	9-18-97	Vail, I. M.	Portland	E.	7-16-97
Mackey, C. W.	Portland	R.	7-14-97	Wiley, Harriet.	Portland	R.	9-3-97
Mason, Samuel	Pennville	R.	8-13-97	Wrennick, Geo. T.	Portland	R.	7-16-97
Metzger, B. S.	Boundary	R.	*	Young, Frank	Powers	E.	7-19-97
Miles, J. T.	Portland	R.	*				

Regular, 39; Eclectic, 12; Homeopathic, 1; Physio-Medical, 7; not classed, 2. Total, 61.

Jefferson County.

Austin, F. H.	Madison	R.	7-14-97	Lewis, Mollie	Madison	NC.	7-19-97
Burdsal, C. A.	Lancaster	R.	7-15-97	Lewis, S. B.	Canaan	R.	8-12-97
Christie, Jas. H.	Canaan	R.	8-2-97	Lewis, J. P.	Dupont	R.	7-28-97
Cochran, Robt. W.	Madison	R.	7-19-97	Matthews, Wm. R.	China	R.	8-24-97
Cohen, Morris S.	Madison	R.	8-9-97	Matthews, C. B.	Kent	R.	8-7-97
Cooperider, J.	Madison	R.	7-19-97	Matthews, J. H.	Madison	R.	8-20-97
Copeland, C. C.	No. Madison	R.	7-24-97	McCurry, W.	Canaan	R.	7-27-97
Davidson, Wm. R.	Madison	R.	8-6-97	McCoy, Wm. A.	Madison	R.	7-14-97
Denny, Chas. W.	Bellevue	R.	7-28-97	Muret, Jas. A.	Madison	R.	8-19-97
Deputy, S. R.	Kent	R.	9-7-97	Penn, Benj. A.	Bryantsburg	R.	7-28-97
Dye, E. A.	Bryantsburg	R.	8-25-97	Rawlings, J. V.	Kent	R.	7-28-97
Flanders, J. W.	Dupont	R.	9-18-97	Robertson, D. W.	Deputy	R.	8-17-97
Ford, S. M.	Madison	R.	7-26-97	Ryker, Chas.	Manville	R.	10-2-97
Forshee, Thos. W.	Madison	R.	7-26-97	Sanderson, Thos.	Madison	R.	7-19-97
Freeman, W.	No. Madison	R.	*	Shepherd, W.	Dupont	R.	9-15-97
Hatch, H. S.	Madison	H.	7-14-97	Stewart, Geo. A.	Brooksburg	R.	7-19-97
Hennessy, F. C.	Madison	R.	6-25-97	Swan, T. E.	Hanover	R.	8-4-97
Hewitt, Geo. W.	Madison	R.	7-26-97	Tevis, E. R.	Brooksburg	R.	9-17-97
Hutchings, W. D.	Madison	R.	7-15-97	Tevis, R. M.	Brooksburg	R.	8-10-97
Johnson, A. H.	Chelsea	R.	8-12-97	Townsend, S. M.	Madison	R.	7-16-97
Johnson, Lola A.	Chelsea	R.	*	Wells, E. M.	Saluda	R.	7-22-97
Kremer, N. A.	Madison	R.	7-16-97	Wheate, J. M.	Kent	R.	11-5-97
Lewis, Geo. C.	Madison	R.	7-23-97				

Regular, 42; Eclectic, 1; Homeopathic, 1; not classed, 1. Total, 45.

Jennings County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Adams, S. D.	Brewersville	R	7-10-97	Martin, F. A.	Commiskey	E	8-5-97
Amick, C. C.	Hayden	R	8-7-97	Mitchell, W. J.	Vernon	R	7-21-97
Case, Wm. W.	Zenas	R	*	Mulvey, Jas. W.	North Vernon	R	7-23-97
Corya, F. M.	Zenas	E	8-5-97	Nelson, H. G.	Vernon	R	7-21-97
Corya, Wallace D.	Nebraska	E	6-28-97	Nighswonger, M.	Hayden	R	8-6-97
Crouch, J. H.	North Vernon	R	10-16-97	Oldham, W. E.	Lovett	R	9-20-97
Firsich, Belthaser	North Vernon	R	*	Phillips, C. W.	Scipio	R	7-19-97
Gaddy, Orville	Paris Crossing	R	7-28-97	Richardson, W. H.	Vernon	R	7-16-97
Gaddy, Nelson D.	Lovett	R	7-24-97	Richardson, N.	Vernon	R	9-9-97
Green, Jas. H.	North Vernon	R	7-16-97	Stemm, Wm. H.	North Vernon	R	7-16-97
Hanna, Jas. L.	Paris Crossing	R	9-8-97	Tharp, Robert	Scipio	NC	7-28-97
Hawthorne, Jacob	North Vernon	R	*	Wildman, Wm. A.	Vernon	R	8-3-97
Kendrick, Jacob	Butlerville	R	7-29-97	Wilson, Harriet C.	Scipio	PM	7-27-97
Light, A. B.	North Vernon	R	7-29-97	Wilson, Wm. L.	Scipio	E	7-27-97

Regular, 22; Eclectic, 4; Physio-Medical, 1; not classed, 1. Total, 28.

Johnson County.

Abbett, Will R.	Greenwood	R	7-15-97	Paine, Luther	Edinburg	E	7-16-97
Avery, Wm. R.	Nineveh	R	7-10-97	Payne, P. W.	Franklin	R	10-11-97
Beckett, Geo. T.	Needham	R	9-1-97	Payne, R. W.	Franklin	R	7-27-97
Beebe, Jas.	Whiteland	E	7-15-97	Payne, C. F.	Franklin	R	7-27-97
Bice, Lon C.	Franklin	R	9-2-97	Phipps, D. L.	Whiteland	R	7-15-97
Bland, J. A.	Edinburg	R	7-19-97	Phipps, I. H.	Needham	R	7-16-97
Byers, R. S.	Trafalgar	R	7-21-97	Province, W. M.	Providence	R	7-21-97
Carnes, Z.	Greenwood	R	7-15-97	Province, C.	Franklin	R	7-19-97
Craig, J. A.	Greenwood	R	7-23-97	Ream, J. D.	Edinburg	R	7-24-97
Cupp, Millard F.	Edinburg	R	8-12-97	Records, Jno. M.	Franklin	R	7-22-97
Davis, Amos T.	Edinburg	R	7-21-97	Rush, W. P.	Edinburg	R	7-25-97
Dixon, Jno. W.	Franklin	R	7-15-97	Saunders, D. R.	Franklin	H	7-24-97
Dobyns, P. K.	Franklin	R	7-14-97	Surface, O. B.	Stone's Cross	R	8-12-97
Donnell, T. C.	Franklin	R	7-15-97	Terhune, R. W.	Whiteland	R	*
Duncan, S. O.	Edinburg	R	7-16-97	Tresslar, J. G.	Bargersville	E	*
Ennis, I. B.	Bud	R	12-30-97	Vandiver, H. R.	Morgantown	R	*
Freeman, F. C.	Franklin	H	7-14-97	Wadsworth, Chas.	Rocklane	R	9-7-97
Hall, W. C.	Franklin	R	7-15-97	Wallace, B.	Franklin	R	7-20-97
Hall, Homer J.	Franklin	R	7-14-97	Way, E. A.	Franklin	R	7-10-97
Hibbs, Irwin	Williamsburg	R	7-26-97	White, Wm. H.	Edinburg	H	7-16-97
Jones, J. T.	Franklin	R	7-16-97	Whitesides, L. L.	Franklin	R	*
Kegley, Jno. L.	Stone's Cross	R	7-17-97	Willan, E. B.	Morgantown	R	8-6-97
Mathews, J. H.	Franklin	R	7-19-97	Willan, R. D.	Trafalgar	R	7-17-97
Mathews, A. E.	Franklin	R	7-16-97	Willan, C. E.	Trafalgar	R	*
Middleton, J. T.	Nineveh	R	*	Williams, F. A.	Smiths Valley	R	8-7-97
Miller, D. H.	Franklin	R	7-17-97	Wishard, J. M.	Greenwood	R	7-15-97
Miller, A.	Whiteland	R	*	Wright, A. F.	Nineveh	R	7-24-97
Myers, H. K.	Edinburg	R	7-20-97	Wood, Jno. C.	Franklin	R	7-16-97
Myers, J. Porter	Edinburg	R	*	Wood, F. W.	Franklin	R	7-7-97
Noble, Thos. B.	Greenwood	R	7-15-97	Young, W. L.	Edinburg	E	9-2-97
Ott, L. E.	Franklin	R	7-28-97	Young, Chas. C.	Edinburg	E	9-20-97

Regular, 54; Eclectic, 5; Homeopathic, 3. Total, 62.

Knox County.

Alexander, Jas. F.	Bruceville	R	10-4-97	Dukate, J. B.	Vincennes	R	7-14-97
Anderson, W. B.	Vincennes	R	7-24-97	Dukate, Jno. S.	Monroe City	R	7-17-97
Barnett, Jno. H.	Vincennes	R	7-14-97	Edmondson, G. W.	Monroe City	R	7-22-97
Beard, S. C.	Vincennes	R	12-1-97	Geyer, Fred'k. E.	Sandborn	E	8-16-97
Beckes, L. M.	Vincennes	R	7-15-97	Goldman, Jas. W.	Monroe City	E	7-16-97
Beckes, N. E.	Vincennes	R	*	Grigsley, Wm. B.	Oaktown	R	12-7-97
Benham, Chas. W.	Vincennes	R	7-14-97	Hall, Silas	Vincennes	R	8-4-97
Benham, Jas.	Wheatland	R	8-13-97	Harris, F. M.	Vincennes	R	7-14-97
Bever, A. C. W.	Vincennes	E	7-12-97	Harrison, Sam'l L.	Vincennes	R	7-31-97
Black, Elijah C.	Wheatland	R	8-28-97	Held, H. W.	Vincennes	R	7-24-97
Caney, P. H.	Vincennes	R	7-15-97	Hodges, Wm. A.	Oaktown	R	12-3-97
Chambers, B. F.	Westphalia	R	*	Hollingsworth, E.	Edwardsport	R	*
Cross, Jno. F.	Vincennes	R	8-4-97	Jessup, R. B. Jr.	Vincennes	R	7-31-97
Cullop, Jas. A.	Bicknell	R	*	Keith, B. F.	Edwardsport	R	9-22-97
Davenport, Wm. H.	Vincennes	R	7-15-97	Kessinger, E. M.	Sandborn	N. C.	8-6-97
Davis, Royce	Decker	R	7-17-97	Knapp, W. T.	Vincennes	H	10-15-97

Knox County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Knapp, Geo.	Vincennes	R.	7-17-97	Robinson, J. L.	Wheatland	R.	8-13-97
Lee, T. L.	Vincennes	R.	7-15-97	Schmadel, Jno. W.	Vincennes	R.	7-22-97
Lisman, Sam'l J.	Oaktown	N. C.	11-5-97	Scott, Jas. M.	Iona	R.	8-13-97
Lytton, Jefferson	Wheatland	N. C.	7-21-97	Smith, H. M.	Vincennes	R.	7-14-97
Marshall, C. C.	Vincennes	N. C.	11-17-97	Smith, Wm. F.	Vincennes	E.	7-23-97
Mayfield, Geo. W.	Bruceville	R.	12-2-97	Smith, Wm.	Emison	R.	7-16-97
McCoy, Jas. N.	Vincennes	R.	8-25-97	Somes, Jos. F.	Vincennes	R.	8-17-97
McDowell, Jas. D.	Vincennes	R.	7-16-97	Sprinkle, W. B.	Oaktown	R.	8-10-97
McDowell, M. M.	Vincennes	R.	7-14-97	Staley, L. B.	Bicknell	R.	8-31-97
McDowell, Jas. Sr.	Bruceville	R.	12-4-97	Strengel, Walter	Monroe City	R.	8-3-97
McDowell, L. C.	Freelandville	R.	9-6-97	Swartzel, J. A.	Vincennes	R.	7-22-97
McGaughy, A. J.	Freelandville	R.	8-2-97	Trout, R. E.	Oaktown	R.	
McGowen, T. J.	Vincennes	R.	7-26-97	Trueblood, J. W.	Monroe City	R.	7-20-97
Moore, M. G.	Vincennes	R.	9-3-97	Trueblood, R. R.	Monroe City	R.	11-9-97
Moore, R. G.	Vincennes	R.	9-3-97	Von Tress, E. C.	Monroe City N. C.	R.	7-19-97
Ramsey, Jno. P.	Vincennes	R.	9-8-97	Whalen, J. R.	Bicknell	R.	7-23-97
Ray, J. W.	Emison	R.	9-6-97	Whitley, J. S.	Sandborn	E.	8-12-97
Reeve, J. L.	Edwardsport	R.	9-15-97	Williams, J. T.	Monroe City	E.	7-16-97
Robbins, Jno. F.	Freelandville	R.	12-8-97				

Regular, 57; Eclectic, 6; Homeopathic, 1; not classed, 5; Total, 69.

Kosciusko County.

Amiss, Jas. M.	Silver Lake	R.	8-13-97	Long, Chas. R.	Piercetown	R.	8-3-97
Bash, J. M.	Warsaw	R.	7-9-97	Love, J. W.	Millwood	E.	8-5-97
Becknell, I. J.	Milford	R.	8-2-97	Lyons, James H.	Webster	R.	7-16-97
Bennett, H. E.	Mentone	R.		Marine, Jno. W.	Etna Green	PM.	7-16-97
Black, Frank W.	Milford	R.	12-9-97	Mathews, C. C.	Leesburg	H.	11-20-97
Bowser, J. H.	Syracuse	R.	9-1-97	McDonald, A. C.	Warsaw	R.	8-27-97
Boydston, B. S.	Atwood	E.	7-22-97	Milice, Anna.	Warsaw	E.	7-17-97
Burket, C. W.	Warsaw	R.	7-10-97	Moody, T. F.	Piercetown	R.	8-24-97
Burket, Benj.	Warsaw	R.	8-13-97	Morehouse, C. S.	Atwood	PM.	3-4-97
Cammack, Thos.	Milford	R.	7-27-97	Moro, F.	Warsaw	R.	12-21-97
Case, W. P.	N. Webster	R.		Patterson, I. B.	Milford	H.	8-12-97
Chandler, J. A.	Warsaw	R.	9-13-97	Potter, Jno. E.	Milford	R.	11-8-97
Clayton, C. M.	Warsaw	E.	7-15-97	Radcliff, Floyd E.	Piercetown	R.	
Dederick, Wm.	Warsaw	H.	7-27-97	Rannels, W. S.	Milford	R.	7-21-97
Dick, M. L.	Piercetown	E.	7-20-97	Richer, J. D.	Warsaw	H.	7-15-97
Dunfee, Jos. W.	Etna Green	PM.	11-10-97	Schoonover, W. R.	Warsaw	R.	7-15-97
Fennier, P. G.	Leesburg	R.	7-15-97	Scott, Wm.	Piercetown	R.	7-24-97
Hawkins, L.	N. Webster	PM.	7-15-97	Shackelford, T. J.	Warsaw	R.	8-24-97
Haffley, Jno. W.	Mentone	E.	10-20-97	Sherbondy, G. W.	Silver Lake	E.	10-16-97
Hiner, Leo A.	Warsaw	R.	12-6-97	Smith, Jas. S.	Warsaw	PM.	7-15-97
Hines, W. L.	Warsaw	R.	8-9-97	Snodgrass, S. J.	Burket	R.	7-15-97
Hoy, B. F.	Syracuse	R.	7-19-97	Starkweather, F. C.	Warsaw	R.	10-2-97
James, Ben. T.	Milford	R.	6-25-97	Stockberger, E.	Mentone	E.	7-21-97
Johnson, A. R.	Atwood	R.	7-19-97	Tennant, L. H.	Piercetown	E.	8-6-97
Jones, C. A.	Leesburg	PM.	7-15-97	Terry, P. E.	Silver Lake	R.	7-27-97
Junkin, S. D.	N. Webster	R.	7-17-97	Thomas, H. A.	Burket	PM.	9-28-97
Ketchum, G. V.	Claypool	R.	7-13-97	Warvel, J. L.	Sidney	H.	10-16-97
King, H. O.	Piercetown	R.	7-28-97	Webber, I. B.	Warsaw	R.	9-3-97
Kiplinger, Wm.	Burket	R.		White, S. G.	Leesburg	R.	9-21-97
Leech, R. V.	Oswego	R.	7-21-97	White, R. P.	Warsaw	R.	7-26-97
Lechrone, Ira.	Packerton	R.		Yocum, M. G.	Mentone	NC.	8-7-97
Leiter, Wm. S.	Claypool	R.	7-12-97				

Regular, 41; Eclectic, 9; Homeopathic, 5; Physio-Medical, 7; not classed, 1. Total, 63.

Lagrange County.

Benham, F. A., Jr.	Lagrange	H.	8-3-97	Newman, H. M.	South Milford	R.	9-7-97
Broughton, F. H.	Wolcottville	R.	8-23-97	Prough, Wm. C.	Mongo	R.	10-28-97
Denny, John N.	Topeka	R.	10-28-97	Reed, U. W.	Topeka	H.	8-25-97
Dryer, D. W.	Lagrange	R.	7-15-97	Ross, J. K.	South Milford	E.	7-26-97
Eash, Samuel M.	Shipshewana	R.		Schrock, H. W.	Lagrange	R.	9-6-97
Engle, J. B.	Lagrange	R.	7-15-97	Short, John L.	Lagrange	R.	7-20-97
Ferguson, Wm. A.	Brighton	R.	10-16-97	Short, William H.	Lagrange	R.	10-16-97
Griffith, Francis P.	Lagrange	R.	7-31-97	Toms, Alpheus	Scott	R.	7-19-97
Grubb, A. G.	Mongo	R.	9-16-97	Wallace, W. B.	Lima	R.	8-16-97
Hostetter, A. J.	Shipshewana	NC.	10-11-97	White, Charles A.	Lagrange	H.	7-24-97
Hughes, William	Lima	R.	7-27-97	White, E. G.	Lagrange	R.	10-21-97
Mendenhall, C. I.	Lagrange	E.	8-26-97	Wyatt, A. R.	Lagrange	R.	7-15-97
Moak, A. S.	Scott	E.	9-13-97	Younkin, J. W.	Wolcottville	E.	7-27-97

Regular, 18; Eclectic, 4; Homeopathic, 3; not classed, 1. Total, 26.

Lake County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Allen, A. D.	Hammond	R.	*	Jackson, Mary E.	Hammond	PM.	8-31-97
Bacon, E. R.	Lowell	R.	7-15-97	Kohr, Thomas W.	East Chicago	R.	*
Ball, H. S.	Crown Point	E.	*	Lauer, A. J.	Whiting	E.	8-16-97
Blackstone, J. K.	Crown Point	R.	7-15-97	Lenney, Joseph B.	Crown Point	R.	7-26-97
Blackstone, W. B.	Crown Point	R.	7-19-97	Mackey, R. C.	Hobart	NC	8-26-97
Blair, C. H.	Hammond	E.	*	Merrill, W. W.	Hammond	E.	9-30-97
Brannon, G. D.	Crown Point	R.	7-15-97	Miller, H. C. F.	Hobart	R.	9-17-97
Brown, H. M.	East Chicago	R.	9-1-97	Pannenberg, J. C.	Hammond	R.	8-2-97
Campbell, C. W.	Hammond	N. C.	8-16-97	Patterson, A. G.	East Chicago	R.	*
Clark, James T.	Hammond	R.	*	Pettibone, Henry	Crown Point	R.	7-15-97
Cole, T. J.	Crown Point	E.	7-17-97	Putnam, W. E.	Whiting	R.	8-16-97
Davis, John E.	Lowell	R.	8-6-97	Quincy, Wm. C.	Lowell	E.	7-20-97
Day, Allen M.	Crown Point	R.	8-5-97	Ruckel, John F.	Hammond	E.	*
Disbrow, E. D.	Hammond	R.	10-2-97	Seidler, Anthony	Dyer	R.	7-26-97
Downing, Wm. L.	Crown Point	R.	*	Shallenb'ger, J. N.	Crown Point	R.	*
Gerrish, A. A.	Lowell	R.	9-27-97	Sharrer, H. E.	Hammond	R.	8-16-97
Gibbs, James C.	Crown Point	H.	7-15-97	Smith, E. E.	Hammond	R.	8-10-97
Gordon, Pliny E.	Hobart	R.	10-22-97	Spear, Robert.	East Chicago	R.	6-26-97
Groman, Charles	Brunswick	H.	7-15-97	Swartz, H. P.	Crown Point	R.	7-15-97
Higgins, John	Crown Point	R.	7-19-97	Take, John F.	Whiting	E.	7-24-97
Hill, Jesse L.	Lowell	R.	7-16-97	Turner, Samuel	Dyer	R.	7-20-97
Hewat, William F.	Hammond	R.	8-16-97	V. De Walker, J. G.	Hammond	E.	8-16-97
Howell, J. W. S.	Hammond	R.	9-29-97	Von Osinski, Jos.	Crown Point	E.	10-18-97
Ibach, P. G.	Hammond	R.	8-9-97	Watson, Jos. C.	Hobart	R.	8-17-97
Iddings, H. L.	Merrillville	R.	7-17-97	Wilcox, Helen B.	Hammond	H.	8-26-97
Jackson, L. D.	Hammond	PM.	8-13-97	Worrell, Wm. B.	Hobart	H.	*

Regular, 52; Eclectic, 9; Homeopathic, 5; Physio-Medical, 2; not classed, 2. Total, 52.

Laporte County.

Allen, Ethan	Laporte	E.	7-9-97	Long, H. H.	Kingsbury	R.	9-18-97
Annis, Eber L.	Laporte	R.	*	Mack, C. S.	Laporte	H.	*
Blinks, E. G.	Michigan City	R.	7-17-97	Martin, F. V.	Westville	H.	7-16-97
Bowman, Wm.	Wanatah	H.	7-24-97	Martin, J. S.	Roll'g Prairie	R.	7-21-97
Briney, W. F.	Michigan City	E.	10-19-97	Martin, H. H.	Laporte	H.	*
Brode, W. D.	Union Mills	R.	7-29-97	Nieukirk, J. W.	Union Mills	R.	*
Crawford, E. F. W.	Hanna	NC	8-13-97	Prentiss, C. M. C.	Laporte	NC	*
Dakin, Geo. M.	Laporte	E.	11-3-97	Prindle, Benlah.	Laporte	R.	7-23-97
Darling, Nelson S.	Laporte	R.	7-14-97	Richards, Phebe	New Carlisle	E.	8-11-97
Dunning, Milo B.	Michigan City	R.	7-16-97	Rogers, J. B.	Michigan City	H.	12-21-97
Ehrlick, H. K.	Laporte	R.	7-16-97	Scott, W. D.	Laporte	H.	7-16-97
Ewing, J. B.	Michigan City	R.	10-19-97	Short, R. B.	Union Mills	R.	7-16-97
Fahnestock, A. A.	Laporte	H.	7-19-97	Spinning, A. L.	Michigan City	R.	10-27-97
Fahnestock, C. S.	Laporte	H.	7-19-97	Sutherland, O. L.	Laporte	H.	11-16-97
Fisher, W. H.	Wanatah	R.	9-21-97	Tollotson, A. G.	Michigan City	R.	7-17-97
Fravel, Theo.	Westville	R.	7-21-97	Watkinsshaw, Wm.	Stillwell	R.	7-23-97
Fuller, C. D.	Roll'g Prairie	H.	9-22-97	Wardner, Horace	Laporte	R.	7-16-97
Godfrey, W. R.	Michigan City	R.	*	Warren, E. R.	Otis	R.	10-1-97
Hollenbeck, B. W.	Westville	E.	7-26-97	Wells, Catherine J.	Laporte	H.	*
Kerrigan, J. J.	Michigan City	R.	*	Wilcox, F. T.	Laporte	R.	7-31-97
Kollock, E. A. A.	Laporte	H.	*	Wilson, W. B.	Roll'g Prairie	E.	8-19-97
Leeson, Geo. M.	Wanatah	R.	8-24-97	Wilson, H. W.	Michigan City	R.	7-16-97

Regular, 24; Eclectic, 6; Homeopathic, 12; not classed, 2. Total, 44.

Lawrence County.

Allen, E. F.	Fayetteville	R.	9-11-97	Gunn, J. H.	Springville	R.	*
Andrews, J. R.	Rivervale	R.	7-17-97	Heckman, W. H.	Bedford	H.	12-4-97
Bare, Addison W.	Bryantville	R.	7-29-97	Hornoker, S. D.	Silverville	NC	7-15-97
Berry, Alfred F.	Rivervale	R.	8-24-97	Hunter, F. S.	Bedford	R.	7-14-97
Bullitt, Thos. W.	Rivervale	R.	8-10-97	Kelly, Jno. C.	Mitchell	R.	7-15-97
Burton, Geo. W.	Mitchell	R.	8-28-97	Ketcham, Jno. D.	Tunnelton	R.	7-26-97
Butler, W. C.	Leesville	R.	7-16-97	Larkin, J. B.	Mitchell	R.	7-21-97
Dierking, A. W.	Oolitic	R.	7-15-97	Martin, R. E.	Heltonville	R.	7-15-97
Dings, W. H.	Huron	R.	8-9-97	McDonald, A. J.	Bedford	R.	7-27-97
Dixon, Henry C.	Tunnelton	R.	8-2-97	McParlin, Jno. T.	Williams	R.	7-22-97
Donica, Thos. M.	Tunnelton	R.	9-3-97	McIntire, E. S.	Mitchell	R.	8-12-97
Duncan, J. B.	Bedford	R.	10-1-97	McLahan, Oliver	Bartlettville	R.	11-24-97
Ellison, Wm. T.	Heltonville	R.	7-19-97	Mitchell, K. E.	Avoca	R.	7-17-97
Emery, Chas. H.	Bedford	R.	7-15-97	Newland, Jno. W.	Bedford	B.	9-27-97
Faubion, James	Heltonville	R.	7-15-97	Perkins, E. L.	Bedford	R.	*
Freelands, Jno. T.	Bedford	R.	12-2-97	Phipps, Jno. M.	Bedford	R.	*

Lawrence County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Rariden, C. E.	Bedford	R.	8-6-97	Stipp, F. E.	Bedford	R.	7-24-97
Ray, Chas. N.	Fort Ritner	R.	*	Voyles, Harvey	Bedford	R.	7-21-97
Short, R. B.	Oolitic	R.	7-19-97	Walls, Geo. W.	Mitchell	R.	7-15-97
Short, Wesley	Springville	R.	*	White, G. W. T. J.	Mitchell	R.	7-15-97
Smith, Spencer W.	Leesville	R.	7-16-97	Wooley, Perry	Heltonville	R.	8-12-97
Smith, Wm. H.	Bedford	R.	7-16-97	Wright, H. W.	Mitchell	R.	8-6-97

Regular, 42; Homeopathic, 1; not classed, 1. Total, 44.

Madison County.

Adair, Noah	Perkinsville	R.	12-28-97	Levy, Chas.	Anderson	R.	7-14-97
Alexander, Lot	Pendleton	R.	12-17-97	Lewis, W. H.	Pendleton	R.	8-23-97
Ardery, Oscar	Anderson	R.	8-24-97	Line, B. A.	Alexandria	PM	7-23-97
Armfield, T. O.	Elwood	R.	7-15-97	Little, Benj. F.	Elwood	H.	8-27-97
Armfield, Jno. D.	Elwood	R.	7-22-97	Littlefield, C. W.	Alexandria	H.	11-26-97
Armington, C. L.	Anderson	R.	7-14-97	Loder, Frank	Gilman	E.	9-4-97
Atherton, R. M.	Anderson	H.	7-19-97	Longanecker, E. W.	Anderson	E.	7-15-97
Ballard, Geo. C.	Summitville	R.	8-27-97	Lowman, J. O.	Anderson	PM	12-28-97
Ballard, Amos B.	Gilman	R.	*	Marshall, Mary E.	Anderson	E.	8-21-97
Boran, Eilan V.	Markleville	R.	*	Mauring, N. H.	Rigdon	R.	12-16-97
Branch, C. N., Sr.	Anderson	R.	8-5-97	McDonald, J. D. A.	Elwood	R.	10-19-97
Branch, C. N., Jr.	Anderson	R.	8-5-97	McTurnan, M. J.	Rigdon	R.	9-29-97
Brickley, W. C.	Anderson	PM	*	Mendenhall, F. F.	Elwood	R.	7-17-97
Brown, Oliver	Anderson	R.	7-16-97	Merson, U. H.	Anderson	H.	8-2-97
Brown, Martin	Summitville	R.	9-21-97	Miley, Isaiah	Anderson	R.	7-24-97
Brownback, O. W.	Pendleton	R.	7-12-97	Miller, A. W.	Anderson	E.	*
Channing, W. S.	Pendleton	PM	8-5-97	Miller, Elizabeth	Anderson	E.	*
Charles, Etta	Summitville	R.	8-17-97	Miller, H. L.	Elwood	R.	7-21-97
Chittenden, G. F.	Anderson	R.	7-17-97	Millickan, J. H.	Elwood	R.	*
Chittenden, E. W.	Anderson	R.	10-5-97	Moore, J. R.	Lapel	R.	10-4-97
Clark, T. J.	Summitville	PM	8-16-97	Morrison, Mary E.	Anderson	PM	*
Clark, T. J.	Orestes	R.	8-13-97	Morrison, J. O.	Anderson	PM	*
Coffin, Oliver S.	Alexandria	E.	7-26-97	Newhouse, Jno. T.	Chesterfield	PM	10-12-97
Cook, Jno. W.	Pendleton	R.	8-24-97	Newlin, S. C.	Anderson	R.	9-4-97
Cook, O. H.	Pendleton	R.	*	Nourse, F. P.	Alexandria	R.	*
Cook, Dan I.	Fishersburg	R.	9-15-97	O'Connor, J. Z.	Elwood	R.	8-11-97
Cook, Joel	Orestes	E.	8-5-97	Otto, A. E.	Alexandria	R.	8-13-97
Cotton, C. C.	Elwood	R.	8-2-97	Peck, J. L. W.	Frankton	PM	7-19-97
Coverston, J. W.	Frankton	R.	7-19-97	Perce, Benj. H.	Anderson	R.	7-15-97
Cullen, Jno. C.	Anderson	R.	*	Petro, B. L.	Markleville	R.	7-22-97
Davis, Jacob W.	Anderson	PM	7-21-97	Plouge, M. L.	Elwood	R.	8-27-97
Diven, Chas. E.	Anderson	R.	7-14-97	Pugh, Jas. W.	Alexandria	R.	7-20-97
Druley, O. E.	Anderson	NC	8-6-97	Quickel, D. S.	Anderson	R.	7-23-97
Easter, W. T.	Summitville	R.	*	Ringe, Jas. L.	Elwood	R.	7-26-97
Ebert, Jno. D.	Dundee	R.	7-19-97	Ruynan, Jas. F.	Alexandria	PM	*
Edwin, S. W.	Elwood	R.	7-28-97	Saunders, G. C.	Orestes	H.	8-3-97
Fairfield, N. W.	Anderson	R.	*	Saunders, Jos.	Anderson	R.	7-21-97
Fairfield, Wm. J.	Anderson	R.	7-22-97	Saylor, Frank L.	Elwood	R.	7-22-97
Fattie, Jno. B.	Anderson	R.	7-31-97	Schaefer, A. R.	Alexandria	E.	10-25-97
Fisher, Jno. M.	Lapel	R.	7-15-97	Schurtz, C. D.	Alexandria	R.	*
Forbs, W. G. V.	Anderson	R.	*	Scott, Wm. F.	Linwood	R.	7-14-97
French, W. J.	Frankton	R.	7-19-97	Sears, A. H.	Anderson	H.	7-16-97
Fritz, P. L.	Alexandria	R.	*	Severns, B. F.	Anderson	E.	*
Fussell, B. S.	Markleville	R.	9-16-97	Sigler, Dan I.	Elwood	R.	7-19-97
Garretson, W. M.	Perkinsville	R.	8-16-97	Stanford, H. H.	Lapel	R.	7-14-97
Gibson, J. J.	Alexandria	R.	*	Stewart, Jonas	Anderson	R.	7-14-97
Gilpin, J. G.	Anderson	R.	7-21-97	Stone, Frank L.	Pendleton	PM	7-14-97
Ginn, Jas. F.	Elwood	PM	7-24-97	Strauss, L. M.	Alexandria	R.	*
Glass, Wm. M.	Summitville	R.	*	Suman, Wm.	Anderson	R.	7-21-97
Graham, J. J.	Lapel	H.	8-10-97	Terrill, L. B.	Anderson	R.	7-16-97
Hall, Jos. E.	Alexandria	R.	7-14-97	Tobias, A. W.	Elwood	R.	7-26-97
Hammond, J. H.	Anderson	R.	7-16-97	Van Horn, C. B.	Frankton	R.	8-18-97
Harter, Jacob H.	Anderson	R.	7-15-97	Van Metre, L. N.	Florida	R.	7-27-97
Harter, Wm. P.	Anderson	R.	7-14-97	Van Nuy, Wm.	Anderson	R.	7-27-97
Haugh, Jno. A. E.	Anderson	R.	7-15-97	Virgus, C. B.	Summitville	R.	8-17-97
Heath, W. N.	Anderson	R.	*	Walser, J. A.	Anderson	R.	7-27-97
Hodges, Fred J.	Anderson	R.	*	White, T. A.	Frankton	R.	7-16-97
Hopenrath, W. H.	Elwood	R.	*	White, F. W.	Summitville	PM	12-28-97
Horne, Wm. N.	Anderson	R.	7-19-97	White, Jno.	Summitville	PM	8-27-97
Hunt, M. V.	Anderson	R.	7-15-97	Whitledge, G. A.	Anderson	R.	8-2-97
Hunt, Jno. W.	Anderson	R.	7-23-97	Williams, Chas. F.	Summitville	R.	8-10-97
Inlow, Jas. E.	Alexandria	R.	*	Williams, Jno. B.	Anderson	PM	7-22-97
Jones, H. E.	Anderson	R.	7-15-97	Williams, L. O.	Anderson	R.	9-20-97
Jones, J. M.	Lapel	R.	8-11-97	Williams, Geo. H.	Anderson	PM	7-41-97
Keller, F. G.	Alexandria	R.	7-26-97	Wills, Jno. B.	Frankton	R.	9-27-97
Kneale, W. W.	Anderson	R.	7-23-97	Wilson, S. C.	Anderson	R.	7-21-97
Lail, J. H.	Ingalls	PM	9-30-97	Wright, C. R.	Frankton	R.	9-16-97
Leib, A. R.	Anderson	H.	*				

Regular, 99; Eclectic, 8; Homeopathic, 9; Physio-Medical, 18; not classed, 1. Total, 135.

Marion County.

Name.	Residence.	School.	Date of County License.
Abbott, Chas. H.	Indianapolis.	E.	7-17-97
Abbott, Francis M.	Indianapolis.	E.	7-9-97
Adams, H. A.	Indianapolis.	H.	7-10-97
Alexander, J. C.	Indianapolis.	R.	7-23-97
Alexander, J. T.	Indianapolis.	R.	8-30-97
Alford, C. H.	Indianapolis.	R.	7-14-97
Allen, H. R., Jr.	Indianapolis.	R.	7-14-97
Allen, Wesley.	West Newton.	R.	8-11-97
Anderson, D. H.	Indianapolis.	R.	7-13-97
Anderson, W. W.	Indianapolis.	R.	*
Anderson, J. E.	Indianapolis.	H.	9-2-97
Anthony, J. R.	Indianapolis.	R.	7-13-97
Anthony, E. G.	Ind'polis.	PM.	7-13-97
Anthony, E.	Ind'polis.	PM.	8-5-97
Ayres, Arthur L.	Indianapolis.	R.	12-22-97
Bacon, Harriet C.	Indianapolis.	H.	7-13-97
Bahr, Max A.	Indianapolis.	R.	*
Baker, J. J.	Ind'polis.	PM.	7-14-97
Baldwin, Helen G.	Indianapolis.	R.	8-7-97
Ball, Addison W.	Indianapolis.	R.	7-14-97
Ball, Cutler T.	Indianapolis.	R.	*
Ballard, J. H.	Indianapolis.	R.	7-14-97
Barmm, C. E.	Indianapolis.	R.	11-13-97
Barnes, Henry F.	Indianapolis.	R.	7-27-97
Barnes, Arthur L.	Southport.	R.	7-20-97
Barnhill, J. F.	Indianapolis.	R.	12-23-97
Bates, Jos. W.	Broad Ripple.	R.	7-17-97
Beard, Elisha.	Indianapolis.	R.	7-22-97
Beck, Wm. S.	Indianapolis.	R.	11-10-97
Becker, F. C.	Indianapolis.	R.	10-16-97
Benford, C. T.	Ind'polis.	PM.	7-23-97
Bell, L. P.	Indianapolis.	R.	12-18-97
Bell, Guido.	Indianapolis.	NC.	7-21-97
Benepe, Jno. L.	Indianapolis.	R.	7-21-97
Benham, J. F.	Indianapolis.	R.	8-9-97
Bennett, T. N.	Nora.	R.	7-22-97
Berauer, G. M.	Indianapolis.	R.	7-14-97
Bergener, G. J.	Indianapolis.	R.	8-16-97
Biebinger, John.	Cumberland.	R.	7-24-97
Bigger, R. H.	Indianapolis.	R.	7-14-97
Bigger, R. F.	Indianapolis.	R.	7-15-97
Billman, G. S.	Indianapolis.	R.	7-16-97
Birkett, C. T.	Castleton.	E.	11-5-97
Blue, Uriah L.	Indianapolis.	E.	7-17-97
Bonham, A. N.	Indianapolis.	H.	7-16-97
Booz, J. C.	Indianapolis.	R.	7-9-97
Bower, J. V.	Millersville.	R.	7-21-97
Bowers, I. H.	Indianapolis.	H.	*
Boyd, Jas. T.	Indianapolis.	H.	*
Boynton, C. S.	Indianapolis.	R.	12-17-97
Brayton, A. W.	Indianapolis.	R.	*
Brennan, E. J.	Indianapolis.	R.	7-20-97
Brigham, E. B.	Ind'polis.	PM.	7-16-97
Brill, J. H.	Indianapolis.	R.	7-10-97
Brown, Eli F.	Indianapolis.	R.	6-23-97
Brown, Benj. A.	Indianapolis.	R.	12-28-97
Brown, Jno. R.	Brightwood.	R.	*
Brown, Sam'l M.	New Bethel.	R.	7-16-97
Brown, C. S.	Wanamaker.	R.	7-11-97
Brown, Wm. M.	Clemmont.	E.	8-31-97
Browning, W. J.	Indianapolis.	NC.	12-30-97
Brubaker, A. S.	Indianapolis.	R.	7-26-97
Bryan, Thos. N.	Indianapolis.	R.	*
Bryan, D. C.	Indianapolis.	R.	7-14-97
Bryan, T. C.	Indianapolis.	R.	7-4-97
Bryan, R. Anna.	Ind'polis.	PM.	8-2-97
Buckner, E. L.	Indianapolis.	R.	7-15-97
Buehler, Jacob.	Indianapolis.	R.	7-19-97
Bula, R. W.	Indianapolis.	H.	7-14-97
Burckhardt, Louis.	Indianapolis.	R.	7-27-97
Bye, W. O.	Indianapolis.	E.	6-19-97
Bye, Benj. F.	Indianapolis.	H.	8-27-97
Cain, J. D.	Indianapolis.	R.	9-21-97
Cain, J. D.	Indianapolis.	R.	8-9-97
Caldwell, W. H.	Indianapolis.	R.	9-7-97
Campbell, L. S.	Indianapolis.	R.	7-15-97

Name.	Residence.	School.	Date of County License.
Canfield, B. V.	Indianapolis.	R.	7-17-97
Caraway, S. H.	Indianapolis.	R.	7-29-97
Carey, G. A. E.	Indianapolis.	R.	7-19-97
Carroll, R. J.	Indianapolis.	R.	7-14-97
Carson, L. O.	Traders Point.	R.	7-20-97
Carter, James.	Indianapolis.	R.	7-17-97
Carter, N. P.	Indianapolis.	R.	7-16-97
Carter, H. W.	Indianapolis.	R.	7-15-97
Carter, Wm. J.	Indianapolis.	R.	8-3-97
Carter, C. A.	Indianapolis.	R.	7-14-97
Carvin, J. M.	Ind'apolis.	PM.	7-15-97
Casebeer, J. B.	Indianapolis.	R.	7-19-97
Castor, H. C.	Indianapolis.	R.	8-21-97
Champion, J. B.	Indianapolis.	R.	*
Charlton, F. R.	Indianapolis.	R.	7-15-97
Christian, W.	Indianapolis.	R.	10-30-97
Christian, G. R.	Glenns Valley.	R.	10-26-97
Clark, A. J.	Indianapolis.	R.	7-17-97
Clark, Wm. H.	Indianapolis.	E.	7-15-97
Clark, E. D.	Indianapolis.	R.	7-19-97
Clark, H. P.	Indianapolis.	R.	8-24-97
Clark, W. B.	Indianapolis.	H.	7-21-97
Cleaveland, C. F.	Indianapolis.	E.	12-29-97
Clemmer, F. O.	Indianapolis.	H.	8-14-97
Clevinger, W. F.	Indianapolis.	R.	7-16-97
Cline, L. C.	Indianapolis.	R.	7-15-97
Cloud, Laura B. J.	Ind'apolis.	PM.	8-13-97
Coble, Geo. A.	N. Augusta.	R.	7-19-97
Coleman, J. M.	Indianapolis.	E.	8-30-97
Cole, Albert M.	Indianapolis.	R.	10-8-97
Collins, A. W.	Indianapolis.	R.	*
Combs, G. W.	Indianapolis.	R.	7-24-97
Cominger, J. A.	Indianapolis.	R.	7-24-97
Compton, J. A.	Indianapolis.	H.	7-15-97
Cook, Geo. J.	Indianapolis.	R.	*
Cook, R. C.	Ind'apolis.	NC.	8-7-97
Cook, M. D.	Indianapolis.	R.	7-14-97
Cook, J. H.	Indianapolis.	R.	10-16-97
Conger, E. S.	Indianapolis.	R.	10-29-97
Coughlin, G. E.	Indianapolis.	R.	*
Courtney, T. E.	Indianapolis.	R.	8-11-97
Cox, Ira E.	Indianapolis.	R.	7-20-97
Craig, Wm. B.	Indianapolis.	R.	8-10-97
Crans, Jas. T.	Indianapolis.	R.	*
Crist, Daniel O.	Stratford.	R.	8-18-97
Cronin, M. C.	Indianapolis.	R.	*
Cropper, Eva A.	Indianapolis.	R.	8-6-97
Croze, S. E.	Indianapolis.	E.	7-16-97
Crow, Chas. R.	Indianapolis.	E.	7-20-97
Cruikshank, O. G.	Indianapolis.	R.	*
Culver, D. M.	Indianapolis.	R.	*
Cunningham, H. S.	Indianapolis.	R.	7-21-97
Curry, Thos. W.	Southport.	R.	7-27-97
Curtis, W. F.	Indianapolis.	E.	7-12-97
Curtis, John E.	Indianapolis.	R.	8-6-97
Darrach, Geo. M.	Cumberland.	R.	7-15-97
Daugherty, J. H.	Irington.	R.	7-28-97
Daum, A. V.	Indianapolis.	R.	8-3-97
Davis, Wm. T.	Indianapolis.	R.	*
Davis, Eugene.	Indianapolis.	R.	8-16-97
Davis, E. J.	Ind'apolis.	PM.	*
Davis, Joel R.	Ind'apolis.	PM.	9-9-97
DeArmine, J. H.	Acton.	H.	*
DeHaas, T. W.	Indianapolis.	R.	9-15-97
Deitch, Oscar S.	Indianapolis.	R.	7-15-97
Deitch, O. L.	Indianapolis.	R.	7-14-97
Dellett, Jacob.	Indianapolis.	R.	7-19-97
Denson, H. A.	Indianapolis.	R.	7-14-97
Dickersen, G. I.	Indianapolis.	R.	9-4-97
Diehl, Ed. J. H.	Indianapolis.	R.	*
Dodds, W. T. S.	Indianapolis.	R.	*
Doremus, G. D.	Indianapolis.	R.	7-21-97
Dowell, Geo. W.	Indianapolis.	E.	8-9-97
Dudley, H. W.	Indianapolis.	R.	*
Dunlap, J. M.	Indianapolis.	R.	7-17-97
Dunlevy, Ira E.	Indianapolis.	R.	7-24-97

Marion County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Dunning, L. H.	Indianapolis.	R.	7-14-97	Helming, T. W.	Indianapolis.	H.	12-30-97
Durham, C. O.	Indianapolis.	R.	7-21-97	Heltman, Jeff. K.	Oaklandon.	E.	8-6-97
Earp, Samuel E.	Indianapolis.	R.	7-14-97	Henderson, S. T.	Indianapolis.	P.M.	7-17-97
Eastman, Thos. B.	Indianapolis.	R.	9-18-97	Hervey, E. V.	Indianapolis.	R.	7-17-97
Eastman, Jos. R.	Indianapolis.	R.	7-15-97	Hessler, Rob't.	Indianapolis.	E.	10-13-97
Eastman, Jos.	Indianapolis.	R.	7-15-97	Hettinger, I. B.	Indianapolis.	E.	7-14-97
Edenharter, G. F.	Indianapolis.	R.	7-14-97	Hicks, J. M.	Indianapolis.	H.	10-28-97
Edward, S. G.	Indianapolis.	R.	*	Hill, A. A.	Indianapolis.	E.	8-6-97
Egbert, James	Indianapolis.	R.	*	Hinshaw, T. M.	Indianapolis.	R.	7-16-97
Eisenbeiss, E. M.	Indianapolis.	R.	7-15-97	Hobbs, Alice L.	Indianapolis.	R.	9-24-97
Elbert, S. A.	Indianapolis.	R.	8-4-97	Hodges, E. F.	Indianapolis.	E.	7-16-97
Engle, W. C.	Brightwood.	R.	7-26-97	Hodgin, E. E.	Indianapolis.	P.M.	7-16-97
Erdman, Bernard	Indianapolis.	R.	9-27-97	Hollingsworth, J. S.	Indianapolis.	R.	7-24-97
Eskew, Howell T.	Indianapolis.	R.	7-14-97	Hoover, Jno. E.	Indianapolis.	E.	8-24-97
Ewing, C. K.	Indianapolis.	H.	7-14-97	Horne, J. A.	Indianapolis.	E.	9-24-97
Falk, Fred K.	Indianapolis.	R.	8-5-97	Hoskins, W. D.	Indianapolis.	R.	12-22-97
Farmer, S. W.	Indianapolis.	E.	8-25-97	Hoss, J. V.	Indianapolis.	R.	8-3-97
Farron, W. R.	Indianapolis.	R.	7-22-97	House, G. H. F.	Indianapolis.	E.	7-15-97
Ferguson, C. E.	Indianapolis.	R.	12-29-97	Houser, J. A.	Indianapolis.	E.	7-14-97
Ferguson, F. C.	Indianapolis.	R.	7-16-97	Howard, E.	Indianapolis.	H.	7-15-97
Ferree, S. L.	Indianapolis.	R.	7-26-97	Howard, L. N.	Indianapolis.	E.	7-15-97
Field, M. H.	Indianapolis.	R.	7-23-97	Howe, R. M.	Indianapolis.	E.	7-15-97
Fisher, G. C.	Indianapolis.	R.	7-15-97	Howe, Wm. F.	Indianapolis.	E.	7-15-97
Fisher, A. W.	Indianapolis.	P.M.	7-31-97	Hulsizer, E. E.	Clermont.	R.	9-27-97
Fisk, J. G.	Indianapolis.	R.	7-23-97	Hurty, J. N.	Indianapolis.	R.	7-1-97
Fletcher, W. B.	Indianapolis.	R.	9-3-97	Hyde, L. A.	Indianapolis.	P.M.	7-21-97
Foxworthy, F. W.	Indianapolis.	R.	12-4-97	Irick, Geo. W.	Indianapolis.	E.	8-13-97
Franz, Jno. P.	Indianapolis.	R.	9-6-97	Jameson, P. H.	Indianapolis.	E.	8-4-97
Freelands, J. L.	Indianapolis.	R.	10-49-7	Jameson, Henry	Indianapolis.	E.	7-15-97
French, Martha J.	Indianapolis.	H.	8-7-97	Jeffries, W. E.	Indianapolis.	E.	7-23-97
French, Benj. F.	Indianapolis.	R.	7-22-97	Jenkins, Jennie	Indianapolis.	R.	7-20-97
Funk, J. B.	Indianapolis.	R.	7-21-97	Jenkins, J. R.	Indianapolis.	E.	7-23-97
Furniss, Henry W.	Indianapolis.	R.	7-15-97	Jennings, W. L.	Bridgeport.	R.	7-23-97
Furniss, S. A.	Indianapolis.	R.	*	Jeter, C. E.	Indianapolis.	E.	*
Gabe, Harry E.	Indianapolis.	R.	*	Jeter, Frank	Indianapolis.	E.	*
Gaddes, Thomas	Indianapolis.	R.	*	Johns, Stephen M.	Indianapolis.	R.	*
Galloway, C. E.	Indianapolis.	R.	*	Johnson, Wm. H.	Indianapolis.	E.	6-22-97
Gardner, Jesse	Indianapolis.	E.	11-12-97	Johnson, O. A.	Indianapolis.	E.	7-15-97
Garshwiler, Jno. A.	Indianapolis.	R.	9-28-97	Jones, P. M.	Indianapolis.	E.	*
Garstang, Reg'd.	Indianapolis.	R.	9-18-97	Jones, H. I.	Indianapolis.	E.	*
Garver, Jno. J.	Indianapolis.	R.	7-15-97	Jones, Levi M.	N. Ind'polis.	R.	*
Gasaway, Thos. O.	Indianapolis.	R.	11-15-97	Jordan, J. S.	Indianapolis.	E.	8-5-97
Gates, W. J.	Indianapolis.	R.	10-14-97	Kaklo, Geo. D.	Indianapolis.	E.	7-26-97
Gay, Ellen H.	Indianapolis.	H.	7-17-97	Kahn, D. L.	Indianapolis.	R.	9-13-97
Gaylord, Harry G.	Indianapolis.	R.	7-17-97	Keller, A. R.	Indianapolis.	R.	*
Gebauer, E. H.	Indianapolis.	R.	12-18-97	Keller, Mrs. M. E.	Indianapolis.	H.	*
Geis, Jno. F.	Indianapolis.	H.	12-18-97	Kelsey, R. C.	Indianapolis.	N.C.	11-10-97
George, J. D.	Indianapolis.	H.	12-18-97	Kelsey, A. I.	Indianapolis.	R.	7-17-97
George, Wm. E.	Indianapolis.	R.	7-19-97	Kendrick, Wm. H.	Indianapolis.	R.	7-21-97
George, Chas. M.	Indianapolis.	R.	7-15-97	Kendrick, Wm. H.	Indianapolis.	R.	8-17-97
Graham, E. G.	Indianapolis.	E.	7-15-97	Kennedy, J. Y.	Indianapolis.	R.	7-15-97
Graham, Alois B.	Indianapolis.	R.	7-15-97	Kennedy, Sam'l A.	Indianapolis.	R.	7-15-97
Graham, H. M.	Indianapolis.	R.	7-15-97	Kimberlin, A. C.	Indianapolis.	R.	7-15-97
Gray, Wm.	Indianapolis.	R.	4-18-97	Kinderberger, W. H.	Indianapolis.	R.	7-15-97
Groff, J. H.	Broad Ripple.	R.	9-30-97	Kistner, Frank B.	Indianapolis.	R.	*
Gundelfinger, B. M.	Indianapolis.	R.	7-14-97	Kitchen, Jno. M.	Indianapolis.	N.C.	12-31-97
Haag, E. L. A.	Indianapolis.	R.	8-27-97	Knerr, C. B.	Indianapolis.	R.	7-22-97
Hadley, Evan	Indianapolis.	P.M.	7-30-97	Knox, E. S.	Indianapolis.	R.	7-15-97
Haggard, E. M.	Indianapolis.	P.M.	7-19-97	Koch, Mrs. A. J. H.	Indianapolis.	P.M.	7-27-97
Hammer, N. J.	Indianapolis.	P.M.	7-26-97	Kolmer, John	Indianapolis.	R.	9-23-97
Hansen, M. J. T.	Indianapolis.	P.M.	8-3-97	Krug, H. L.	Indianapolis.	R.	7-21-97
Harold, C. N.	Indianapolis.	P.M.	7-24-97	Lake, M. Elizabeth	Indianapolis.	P.M.	9-6-97
Harrold, A. R.	Indianapolis.	P.M.	9-27-97	Lambert, J. A.	Indianapolis.	R.	7-16-97
Hart, Millard M.	Indianapolis.	R.	*	Lash, H. M.	Indianapolis.	R.	7-19-97
Harvey, Jessie B.	Indianapolis.	R.	9-21-97	Laycock, R. T.	Indianapolis.	E.	8-3-97
Harvey, Wm. F.	Brightwood.	R.	7-15-97	Lench, Thos. J.	Indianapolis.	P.M.	7-19-97
Harvey, D. B.	Cumberland.	R.	7-20-97	Lench, Jas. T.	Indianapolis.	R.	*
Haskinson, Aimee	Indianapolis.	R.	7-14-97	Leatherman, A. L.	Indianapolis.	R.	10-5-97
Haslep, Marietta	Indianapolis.	R.	7-14-97	Leathers, D. A.	Indianapolis.	R.	7-15-97
Hasty, Geo.	Indianapolis.	P.M.	7-14-97	Leeth, M. C.	Indianapolis.	R.	7-20-97
Haynes, J. R.	Indianapolis.	R.	8-4-97	Lewis, Jno. I.	Indianapolis.	R.	7-16-97
Haynes, W. H.	Indianapolis.	R.	7-31-97	Lewis, Jas. C.	Indianapolis.	R.	7-17-97
Hays, Franklin W.	Indianapolis.	R.	7-24-97	Lewis, E. R.	Indianapolis.	R.	7-17-97
Hazleton, Lizzie E.	Indianapolis.	R.	7-24-97	Light, Robert C.	Broad Ripple.	R.	7-17-97
Heath, F. C.	Indianapolis.	R.	7-24-97	Loder, Jennie C.	Indianapolis.	E.	7-17-97
				Long, Jno. B.	Indianapolis.	R.	7-17-97

Marion County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Long, Robert W.	Indianapolis.	R.	8-2-97	Payne, J. H.	Julietta.	R.	7-17-97
Long, Henry	Indianapolis.	E.	7-5-97	Peachee, H.	Indianapolis.	R.	7-19-97
Loughridge, J. E.	Indianapolis.	R.	7-17-97	Peck, y. Wm. F.	Indianapolis.	R.	7-26-97
Dowry, C. O.	Indianapolis.	R.	9-9-97	Pendleton, Geo.	Indianapolis.	R.	7-17-97
Ludlow, Edmond	Indianapolis.	R.	7-20-97	Pettijohn, O. B.	Indianapolis.	R.	7-17-97
Lukensbill, O. C.	Indianapolis.	R.	7-17-97	Pettijohn, F. L.	Indianapolis.	R.	12-28-97
Lutz, Geo. W.	Indianapolis.	R.	7-27-97	Pfaff, O. G.	Indianapolis.	R.	12-18-97
Mace, Laura	Indianapolis.	R.	7-27-97	Pink, Hermann	Indianapolis.	R.	7-17-97
MacIvor, Flora	Indianapolis.	R.	7-23-97	Plasterer, P. C.	Indianapolis.	R.	8-4-97
Maddox, O. E.	Indianapolis.	H.	7-27-97	Pott, r. Th. o.	Indianapolis.	R.	10-25-97
Madson, Mary M.	Indianapolis.	E.	7-23-97	Porter, E. D.	Indianapolis.	R.	7-17-97
Magel, Frank	Indianapolis.	P. M.	11-12-97	Poucher, C. H. C.	Indianapolis.	R.	7-17-97
Malloy, J. S.	Indianapolis.	R.	7-17-97	Prentiss, J. H. F.	Indianapolis.	R.	7-17-97
Malone, Brig'ta E.	Indianapolis.	R.	7-28-97	Preston, A. L.	Indianapolis.	R.	7-27-97
Malone, L. A.	Indianapolis.	R.	7-15-97	Pritchard, J. E.	Indianapolis.	R.	8-2-97
Malpas, S. H.	Indianapolis.	N. C.	7-10-97	Prunk, Byron F.	Indianapolis.	R.	11-12-97
Manchester, J. J.	Indianapolis.	R.	7-19-97	Prunk, D. H.	Indianapolis.	R.	7-16-97
Manker, F. E.	Indianapolis.	R.	7-17-97	Purman, S. B.	Indianapolis.	R.	7-21-97
Manners, Jno. I.	Indianapolis.	R.	7-26-97	Rainey, H. W.	Indianapolis.	R.	7-21-97
Mapes, S. H.	Indianapolis.	R.	7-26-97	Ratliff, L. H.	Indianapolis.	R.	8-7-97
Marlott, C. L.	Indianapolis.	R.	7-19-97	Ratliff, B.	Indianapolis.	R.	7-26-97
Marsee, J. W.	Indianapolis.	R.	7-27-97	Reading, G. P.	Indianapolis.	R.	8-9-97
Martin, C. C.	Indianapolis.	R.	8-3-97	Records, Samuel	Indianapolis.	R.	8-2-97
Martin, John A.	Indianapolis.	R.	9-29-97	Reed, Wilson	Indianapolis.	R.	7-15-97
Marxer, C. W.	Indianapolis.	R.	11-4-97	Reyer, E. C.	Indianapolis.	R.	8-19-97
Masters, John L.	Indianapolis.	R.	7-30-97	Rhodes, Jackson	Indianapolis.	R.	7-15-97
Maxwell, Allison	Indianapolis.	R.	7-15-97	Rice, W. G.	Indianapolis.	R.	8-6-97
Maxwell, F. R.	Indianapolis.	R.	7-15-97	Ridpath, H. W.	Indianapolis.	R.	7-27-97
McAlexander, R. O.	Indianapolis.	R.	12-31-97	Ritter, C. L.	Indianapolis.	R.	9-21-97
McClellan, Alonzo	Indianapolis.	P. M.	12-31-97	Robertson, J. F.	Indianapolis.	R.	10-7-97
McCulloch, C. B.	Indianapolis.	H.	8-5-97	Robinson, W. B.	Indianapolis.	R.	7-15-97
McCurdy, L. A.	Indianapolis.	R.	7-27-97	Rogers, Henry C.	Indianapolis.	R.	7-23-97
McCurdy, O. B. C.	Indianapolis.	R.	7-21-97	Rogers, Rebecca W.	Indianapolis.	R.	7-16-97
McDonald, Wm. B.	Indianapolis.	R.	7-28-97	Ross, David	Indianapolis.	R.	12-23-97
Melvin, L. C.	Indianapolis.	R.	7-23-97	Row, G. S.	Indianapolis.	R.	7-21-97
McLeary, J. D.	Indianapolis.	R.	7-23-97	Rowe, L. M.	Indianapolis.	R.	7-16-97
McMahan, S. W.	Indianapolis.	R.	7-23-97	Runnells, S. I.	Indianapolis.	R.	7-15-97
McNab, Philip	Indianapolis.	R.	7-23-97	Runnells, O. S.	Indianapolis.	R.	7-21-97
McNaull, Chas.	Indianapolis.	R.	7-23-97	Ryan, Wm. B.	Indianapolis.	R.	7-23-97
McShane, John T.	Indianapolis.	R.	7-23-97	Sadler, Wm. C.	Indianapolis.	R.	12-23-97
Mendenhall, C. W.	Indianapolis.	R.	7-15-97	Salinger, S. F.	Indianapolis.	R.	7-15-97
Metzler, S. N.	Indianapolis.	R.	7-14-97	Schaeffer, Geo. C.	Indianapolis.	R.	12-18-97
Miller, Jos.	Indianapolis.	E.	7-29-97	Schaefer, C. R.	Indianapolis.	R.	7-16-97
Moffett, N. C.	Indianapolis.	E.	7-19-97	Schenck, Luella M.	Indianapolis.	R.	7-16-97
Moffett, E. D.	Indianapolis.	R.	8-16-97	Scher, r. S. P.	Indianapolis.	R.	7-16-97
Molt, W. F.	Indianapolis.	N. C.	8-16-97	Schmidt, A. L.	Indianapolis.	R.	7-16-97
Moore, S. H.	Indianapolis.	R.	8-16-97	Schneider, A. J.	Indianapolis.	R.	7-16-97
Moore, C. M.	Indianapolis.	R.	8-16-97	Scott, J. T.	Indianapolis.	R.	8-13-97
Moore, Harry S.	Indianapolis.	R.	8-13-97	Seaton, Wm. H.	Indianapolis.	R.	8-3-97
Morgan, Abraham	Indianapolis.	E.	10-9-97	Seller, T. P.	Indianapolis.	R.	7-19-97
Morgan, Wm. V.	Indianapolis.	R.	7-22-97	Selman, A. G.	Indianapolis.	R.	7-24-97
Morgan, Ralph	Indianapolis.	R.	8-20-97	Servoss, Geo. L.	Indianapolis.	R.	10-4-97
Morris, Minor	Indianapolis.	R.	9-3-97	Shetterley, W. R.	Indianapolis.	R.	7-19-97
Morrison, F. A.	Indianapolis.	R.	7-15-97	Shobe, Norman T.	Indianapolis.	R.	7-29-97
Morrow, J. E.	Indianapolis.	R.	12-8-97	Shoemaker, S. A.	Indianapolis.	R.	7-16-97
Mueller, Anton	Indianapolis.	P. M.	7-29-97	Shreve, Franklin	Indianapolis.	R.	7-14-97
Mullan, A. J.	Indianapolis.	R.	8-19-97	Shreve, Eva	Indianapolis.	R.	8-13-97
Nash, G. W.	Indianapolis.	R.	7-29-97	Siegrist, Julia A.	Indianapolis.	R.	7-23-97
Neff, John W.	Indianapolis.	R.	8-19-97	Sigler, Geo. A.	Indianapolis.	R.	7-23-97
Nehrbas, John G.	Indianapolis.	R.	7-14-97	Sims, Ernest R.	Indianapolis.	R.	7-19-97
Newton, W. T.	Indianapolis.	R.	7-22-97	Sluss, John W.	Indianapolis.	R.	7-29-97
Nichols, J. D.	Indianapolis.	R.	6-22-97	Smith, Earl C.	Indianapolis.	R.	7-16-97
Noble, Thos. B.	Indianapolis.	N. C.	7-23-97	Smith, C. F.	Indianapolis.	R.	12-17-97
Ogle, Albert A.	Indianapolis.	H.	8-11-97	Smith, Walter	Indianapolis.	P. M.	7-14-97
Oliver, John H.	Indianapolis.	R.	7-30-97	Smith, Martha J.	Indianapolis.	R.	8-31-97
Osburn, Eda A.	Indianapolis.	P. M.	7-30-97	Smith, Bartley	Indianapolis.	P. M.	7-16-97
Osenback, Wm.	Indianapolis.	R.	7-15-97	Smith, Mary	Indianapolis.	R.	7-16-97
Ostroff, Henry	Indianapolis.	R.	7-15-97	Snoke, David H.	Indianapolis.	P. M.	7-16-97
Outland, E. M.	Indianapolis.	P. M.	7-15-97	Snowden, Jesse	Indianapolis.	R.	12-18-97
Page, Lafayette	Indianapolis.	R.	7-22-97	Sou, e. Sarah A.	Indianapolis.	R.	7-12-97
Pantzer, H. O.	Indianapolis.	R.	7-22-97	Spaulding, John	Indianapolis.	R.	7-23-97
Park, H. A. S.	Indianapolis.	E.	7-22-97	Spe, s. B. N. E.	Indianapolis.	R.	7-21-97
Parker, Edward E.	Indianapolis.	R.	7-15-97	Spencer, M. J.	Indianapolis.	R.	7-28-97
Parsons, John S.	Indianapolis.	R.	7-15-97	Spicer, J. W.	Indianapolis.	R.	7-28-97
Pattlow, John W.	Indianapolis.	R.	7-15-97				
Patterson, A. W.	Indianapolis.	R.	7-15-97				

Marion County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Spink, Mary A.	Indianapolis	R	12-18-97	Van Hummell, Q.	Indianapolis	R	10-4-97
Stafford, C. A.	Ind'polis	P. M.	10-19-97	Vincent, S. R.	Indianapolis	H	12-19-97
Stanley, Jno. M.	Indianapolis	R	7-21-97	Wadsworth, A.	Castleton	R	8-9-97
Steele, Wm. W.	Indianapolis	R	7-19-97	Wagner, Theo. A.	Indianapolis	R	10-18-97
Stephenson, J. C.	Indianapolis	R	8-11-97	Waide, Robert	Ind'polis	P. M.	8-31-97
Sterne, A. E.	Indianapolis	R	7-14-97	Walker, Isaac C.	Indianapolis	R	7-22-97
Stevens, O. L.	Indianapolis	E	8-23-97	Wall, David	Indianapolis	R	8-9-97
Stewart, L. C.	Indianapolis	H	8-24-97	Walsh, Alice C.	Ind'polis	P. M.	8-2-97
Stewart, W. B.	Indianapolis	H	8-21-97	Wands, William	Indianapolis	R	12-23-97
Stewart, F. C.	Indianapolis	H	7-14-97	Ward, Joseph H.	Ind'polis	P. M.	10-15-97
Stillson, J. O.	Indianapolis	R	7-17-97	Ward, A. O.	Indianapolis	R	7-15-97
Stine, D. L.	Indianapolis	R	7-15-97	Ward, C. L.	Cumberland	R	12-21-97
Stockton, Sarah	Indianapolis	R	7-13-97	Watters, P. J.	Indianapolis	R	7-17-97
Stone, Mary C.	Indianapolis	R	11-4-97	Wechsler, H.	Indianapolis	R	7-22-97
Stone, John W.	Indianapolis	R	7-17-97	Weer, H. H.	Indianapolis	R	8-19-97
Stone, R. F.	Indianapolis	R	10-11-97	Wehrman, E. A.	Indianapolis	H	7-17-97
Storch, L. A. E.	Indianapolis	R	7-22-97	Weiss, C. G.	Indianapolis	R	7-17-97
Stratford, Alfred	Indianapolis	R	7-14-97	Westover, R. L.	Indianapolis	R	7-23-97
Stucky, Thos. E.	Indianapolis	R	8-3-97	White, A. R.	Indianapolis	R	9-27-97
Study, Jos. N.	Indianapolis	R	7-22-97	White, Samuel S.	Indianapolis	R	7-20-97
Suhre, E. F.	Indianapolis	R	7-14-97	Wiles, F. M.	Indianapolis	R	7-17-97
Sutcliffe, J. A.	Indianapolis	R	7-28-97	Williams, W. O.	Indianapolis	R	7-22-97
Swain, Rachel	Indianapolis	R	7-20-97	Williams, M. A.	Indianapolis	R	7-15-97
Swain, Fremont	Indianapolis	R	8-17-97	Williams, J. L.	Indianapolis	E	9-21-97
Talbott, John H.	Indianapolis	R	7-13-97	Williamson, J. W.	Indianapolis	R	7-16-97
Taylor, Jas. H.	Indianapolis	R	8-3-97	Wilms, F. A.	Indianapolis	R	7-14-97
Taylor, O. S.	Indianapolis	E	9-21-97	Wilson, L.	Indianapolis	R	7-14-97
Teague, A. E.	Indianapolis	E	7-12-97	Wilson, C. A.	Indianapolis	R	7-14-97
Teague, Mable M.	Indianapolis	R	12-31-97	Wilson, C. L.	Indianapolis	R	7-19-97
Tebault, Wm. P.	Indianapolis	R	8-12-97	Wilson, J. F.	Indianapolis	E	7-15-97
Terrell, B. J.	Irvington	R	10-11-97	Wishard, W. H.	Indianapolis	R	7-5-97
Tinsley, E. C.	Indianapolis	R	7-26-97	Wishard, W. N.	Indianapolis	R	7-21-97
Thomas, E. C.	Indianapolis	R	8-23-97	Witham, S. L.	India, polis	R	7-15-97
Thomas, Wm. H.	Indianapolis	R	7-20-97	Witt, Lazarus	Indianapolis	R	9-30-97
Thomas, M. H.	Indianapolis	H	7-27-97	Wolford, C. T.	Indianapolis	E	7-21-97
Thompson, E. C.	Irvington	R	7-26-97	Wood, Levi	Indianapolis	P. M.	7-17-97
Thompson, T. L.	Indianapolis	R	12-9-97	Woodard, N. D.	Indianapolis	R	7-15-97
Thompson, J. L.	Indianapolis	R	7-26-97	Woodburn, Fred	Indianapolis	R	7-14-97
Thompson, D. A.	Indianapolis	R	7-21-97	Woodburn, J. H.	Indianapolis	R	7-29-97
Todd, L. L.	Indianapolis	R	8-26-97	Wooden, G. V.	Indianapolis	R	7-19-97
Tolley, Wm. G.	Indianapolis	R	7-26-97	Wright, George	Ind'polis	P. M.	12-11-97
Tomlin, Wm. S.	Indianapolis	R	7-21-97	Wright, Wm. M.	Indianapolis	R	7-14-97
Towles, A. N.	Irvington	R	7-21-97	Wright, C. E.	Indianapolis	R	8-19-97
Trees, I. W.	Indianapolis	R	8-5-97	Wylie, B. M.	Indianapolis	R	8-28-97
Trenary, D. F.	Indianapolis	R	7-24-97	Wynn, F. B.	Indianapolis	R	12-21-97
Tucker, Geo. W.	Indianapolis	R	7-21-97	Yoke, Charles	Bridgeport	R	1-218-97
Tucker, T. C.	Ben Davis	E	9-1-97	Young, T. J.	Indianapolis	R	12-21-97
Twitcheil, Alice E.	Ind'polis	P. M.		Young, M. A.	Indianapolis	R	12-21-97
Van Hummell, H.	Indianapolis	R		Zitzlaff, C. J.	Indianapolis	R	

Regular, 428; Eclectic, 47; Homeopathic, 35; Physio-Medical, 37; not classed, 9.
Total, 556.

Marshall County.

Aspinall, N. B.	Plymouth	R	7-10-97	Holtzendorff, C. F.	La Paz	R	7-29-97
Babeock, I. L.	Maxinkuckee	E	7-14-97	How, J. T.	Plymouth	H	7-19-97
Bell, J. F.	Inwood	R	7-26-97	Jackson, Wm.	Plymouth	E	7-21-97
Borton, T. A.	Plymouth	R	7-9-97	Johnson, Luther	Bourbon	R	7-14-97
Bower, Isaiah	Plymouth	R	7-20-97	Kaszer, Jacob	Plymouth	R	7-26-97
Brown, Chas. A.	Plymouth	H	7-20-97	Kendall, John T.	Argos	R	7-15-97
Cable, A. Z.	Maxinkuckee	R	7-13-97	Kizer, J. H.	Inwood	R	7-10-97
Chapman, Clark	Argos	N. C.	11-1-97	Knott, D. C.	Plymouth	E	7-23-97
Church, Isaac W.	Bremen	R	7-29-97	Loring, S. C.	Burr Oak	R	7-20-97
Dunfee, Joseph	Rochester	N. C.	7-17-97	Martin, J. S.	Plymouth	H	7-28-97
Eidson, J. Wm.	Bourbon	R	8-13-97	Matchette, A. C.	Bourbon	R	7-28-97
Eley, L. D.	Plymouth	R	8-11-97	Neville, R.	Teegarden	R	7-28-97
Gould, Samuel W.	Argos	R	7-20-97	Nusbaum, C. E.	Bremen	R	8-3-97
Hamilton, John J.	La Paz	R	7-12-97	Oyler, Wm. A.	Argos	R	7-12-97
Harris, C. M.	Bourbon	R	7-30-97	Parks, John P.	Bourbon	E	8-20-97
Herring, N. A.	Bremen	E	7-15-97	Presler, H. M.	Argos	R	7-16-97
Holtzendorff, H. C.	Plymouth	R		Rea, O. A.	Culver	R	7-23-97
Holtzendorff, A. C.	Plymouth	R		Reynolds, Geo. R.	Plymouth	R	

Marshall County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Richey, S. R.	Donaldson	R.	7-17-97	Stevens, A. E.	Maxinkuckee	R.	7-26-97
Ringle, T. F.	Tippecanoe	R.	7-19-97	Viets, E. W.	Plymouth	H.	*
Sarber, W. C.	Argos	R.	7-20-97	Wahl, G. F.	Bremen	R.	7-17-97
Smith, John W.	Plymouth	R.	7-20-97	Weiser, W. A.	Bourbon	PM	12-22-97
Smith, T. D.	Bremen	E.	11-23-97	Wiseman, B. W. S.	Culver	R.	7-15-97
Smith, Flora W.	Bremen	E.	*	Wilson, J. H.	Plymouth	R.	7-23-97
Spencer, Jos.	Tippecanoe	NC.	7-23-97	Younkin, A. B.	Bremen	R.	7-27-97
Stephens, R. C.	Plymouth	R.	7-26-97				

Regular, 36; Eclectic, 7; Homeopathic, 4; Physio-Medical, 1; not classed, 3. Total, 51.

Martin County.

Brittain, S. H.	Loogootee	R.	7-16-97	Plummer, I. N.	Shoals	R.	7-22-97
Dollens, Tiry C.	Trinity Spr'gs.	R.	8-17-97	Porter, A. W.	Loogootee	E.	11-24-97
Dooley, M. M.	Loogootee	R.	7-19-97	Robinson, Geo. M.	Loogootee	R.	7-16-97
Freeman, G. M.	Shoals	R.	12-31-97	Shirley, H. W.	Shoals	R.	9-17-97
Hammon, E. W.	Shoals	R.	7-14-97	Sims, J. N.	Dover Hill	E.	9-8-97
Hays, Thomas A.	Burns City	R.	*	Trueblood, J. C.	Loogootee	R.	7-31-97
Long, E. E.	Shoals	R.	10-1-97	Wright, B. C.	Short	R.	7-16-97
Mallott, George F.	Harrisonville NC.	*					

Regular, 12; Eclectic, 2; not classed, 1. Total, 15.

Miami County.

Abbott, H. B.	Rochester	R.	9-8-97	Kimball, M. C.	Converse	R.	8-27-97
Ager, Upton A.	Peru	R.	*	Litzenberger, O.	Converse	R.	7-30-97
Alford, Henry	Peru	R.	12-20-97	Magruder, J. W.	Peru	R.	7-15-97
Armstrong, W. K.	Peru	R.	8-31-97	Malsbury, L. O.	Peru	R.	7-13-97
Bacon, David	Bunker Hill	R.	7-30-97	Malsbury, J. O.	Peru	R.	7-17-97
Bakehorn, L. M.	Peru	PM	8-17-97	Marsh, S. S.	Santa Fe	R.	8-7-97
Baldwin, M. F.	Converse	E.	11-11-97	McDowell, H. P.	Peru	R.	*
Baldwin, Jno. A.	Amboy	E.	12-8-97	Meek, Jas. A.	Bunker Hill	R.	9-6-97
Bloomfield, E. M.	Peru	R.	7-21-97	Miller, L. A.	Peru	R.	*
Boggs, M. M.	Macy	R.	7-30-97	Moore, Jno. W.	Mexico	R.	8-16-97
Bolan, M. J.	Peru	R.	7-13-97	Newell, J. W.	Denver	R.	7-23-97
Bradley, Nathan I.	Butler	PM	7-31-97	Passage, H. V.	Peru	R.	7-15-97
Brenton, Wm. H.	Peru	R.	7-23-97	Peters, John B.	Macy	R.	9-24-97
Brower, Josiah	Gilead	E.	11-11-97	Ramsey, S. G.	Hooversburg	R.	*
Carl, O. U.	Wawpecong	R.	8-31-97	Ridenour, David	Chili	R.	7-21-97
Darnell, Wm. J.	Denver	R.	8-12-97	Ridenour, D. C.	Peru	R.	7-24-97
Dav, Geo. W.	Miami	E.	8-5-97	Rutherford, C. E.	Peru	H.	7-15-97
Davis, Farmer	Amboy	PM	9-2-97	Smith, A. F.	Wawpecong	R.	7-17-97
Dodds, A. J.	Mexico	R.	8-19-97	Spooner, Jared	Peru	R.	7-17-97
Eikenberry, A. A.	Peru	H.	7-26-97	Swift, E. D.	Macy	R.	12-23-97
Eikenberry, B. F.	Peru	H.	7-15-97	Taylor, Claire	Peru	R.	7-15-97
Frierwood, S. M.	North Grove	R.	9-4-97	Wainwright, O. C.	Peru	R.	7-15-97
Fritz, Jno. C.	Deedsville	R.	8-13-97	Wallace, L. S.	Bunker Hill	R.	7-26-97
Griswold, E. H.	Peru	R.	7-19-97	Ward, J. O.	Peru	R.	7-22-97
Han, H. C.	Peru	H.	8-26-97	Wareham, J. W.	Gilead	R.	7-21-97
Haidley, Wm. H.	Amboy	E.	8-27-97	Watkins, F. H.	Peru	E.	7-15-97
Hardman, R. H.	Converse	R.	9-24-97	Wilson, Wm. T.	Bunker Hill	R.	8-9-97
Hoffman, G. E.	Peru	R.	7-30-97	Wilson, J. S.	Macy	E.	7-3-97
Houser, S. K.	Converse	N.	8-17-97	Wittwer, W. F.	Denver	R.	7-30-97
Ijams, Thos. F.	North Grove	R.	7-17-97	Wright, S. M.	Denver	E.	*
Kalbfleisch, A. H.	Peru	H.	7-19-97	Yarling, Jno. C.	Peru	R.	8-20-97
Kelsey, Thos. W.	Converse	R.	*	Zimmer, E. G.	Santa Fe	R.	*

Regular, 47; Eclectic, 8; Homeopathic, 5; Physio-Medical, 3; not classed, 1. Total, 64.

Monroe County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Abbott, Mano	Bloomington	E		Judah, M. T.	Gent	R	7-10-97
Axtell, Andrew J.	Bloomington	R	7-13-97	Leech, Thos. F.	Bloomington	R	9-13-97
Baker, Rob't E.	Harrodsburg	R	7- 6-97	Leonard, John H.	Smithville	R	7-10-97
Davis, O. F.	Bloomington	R	*	Lowder, L. T.	Bloomington	R	9-17-97
Farr, A. C.	Bloomington	R	7- 9-97	Luzadder, J. E.	Smithville	R	7-10-97
Fritch, Joseph	Unionville	R	7-10-97	Munson, Geo. H.	Stanford	R	10-28-97
Galloway, U. G.	Ellettsville	R	7-10-97	Potts, J. F.	Bloomington	R	7-12-97
Hacker, W. P.	Whitehall	R	7-13-97	Presley, I. N.	Ellettsville	E	7-12-97
Hamilton, H. C. J.	Bloomington	R	8- 2-97	Rice, N. L.	Bloomington	E	9-20-97
Harris, C. Edward	Bloomington	R	6-25-97	Rogers, R. C.	Bloomington	R	9-17-97
Harris, Jno. E.	Bloomington	R	7- 8-97	Shrum, Mark	Bloomington	R	7-12-97
Harris, O. K.	Ellettsville	R	7- 8-97	Smith, R. D.	Bloomington	R	6-15-97
Harris, W. W.	Ellettsville	R	7- 8-97	Threlkeld, J. H.	Gent.	PM	7-13-97
Holland, P. C.	Bloomington	R	7-14-97	Tourner, Jno. P.	Bloomington	R	7-12-97
Holtzman, W. R.	Stinesville	R	7-13-97	Weir, C. T.	Bloomington	R	7-13-97
Hon, A. W.	Harrodsburg	R	7- 8-97	Weir, R. M.	Bloomington	R	7-13-97
Hon, U. H.	Bloomington	R	7- 8-97	Whitted, Wm. L.	Bloomington	R	7-12-97
Jackson, Jerry	Bloomington	R	9-30-97				

Regular, 31; Eclectic, 3; Physio-Medical, 1. Total, 35.

Montgomery County.

Bull, T. Z.	Waveland	R	7-15-97	Hamilton, R. J.	Darlington	R	7- 6-97
Barous, Paul J.	Crawfor'sville	R	7-14-97	Hard, A. D.	Crawfor'sville	R	7-14-97
Beatty, Jas. L.	New Market	R	11- 1-97	Henry, A. F.	Alamo	R	8- 7-97
Berry, Julian	Crawfor'sville	R	*	Hill, H. C.	Darlington	R	7-15-97
Black, Dayton R.	New Richmond	R	7-21-97	Hurt, W. J.	Waynetown	R	7-23-97
Bounnell, H. M.	Waynetown	R	7-19-97	Hutchings, B. F.	Crawfor'sville	R	7-16-97
Bowers, Homer	New Ross	E	7-21-97	Hyden, Wm. H.	Parksburg	R	10-30-97
Britton, C. J.	Crawfor'sville	R	*	Irwin, S. G.	Crawfor'sville	R	7-23-97
Bronough, C. T.	New Ross	R	7-28-97	Jones, O. H.	Crawfor'sville	R	7-16-97
Brown, L. L.	Kirkpatrick	R	7-17-97	Keegan,	Crawfor'sville	R	9-22-97
Brown, L. F.	Alamo	R	8-18-97	King, R. F.	New Ross	R	9- 2-97
Brown, I. L.	Alamo	R	8- 7-97	Kleisner, A. J.	Waveland	R	10- 5-97
Burroughs, W. H.	Shannondale	R	8 16-97	Layne, P. M.	Crawfor'sville	E	7-16-97
Carier, N. M.	Crawfor'sville	E	*	Lofland, Wm. A.	Linden	R	7-16-97
Chambers, W. B.	Crawfor'sville	H	7-22-97	Lynn, F. M.	New Richmond	R	8-10-97
Claypool, J. S.	Waynetown	R	7-19-97	Mahorney, J. C.	Ladoga	H	8- 5-97
Coffman, J. S.	Darlington	E	7-27-97	May, W. S.	Crawfor'sville	R	7-14-97
Cowan, E. H.	Crawfor'sville	R	8-30-97	Olin, L. W.	Elmdale	R	7-23-97
Crafton, Owen T.	Waveland	R	7-19-97	Peacock, Sam'l R.	Ladoga	R	10- 6-97
Davidson, J. F.	Crawfor'sville	R	7-16-97	Peacock, N. F.	Ladoga	R	9- 9-97
Dennis, Fred A.	Crawfor'sville	R	*	Price, E. O.	Ladoga	R	7-27-97
Detchon, E.	Crawfor'sville	R	7-14-97	Ristine, W. H.	Crawfor'sville	R	8-17-97
Detchon, Irwin A.	Crawfor'sville	R	7-21-97	Shotts, H. R.	Mace	R	7-17-97
Dewey, Geo. W.	Crawfor'sville	R	7-17-97	Sidkay, C. J.	Ladoga	R	8-20-97
Dickerson, Jas. W.	Wingate	E	7-22-97	Straughan, K. K.	Waveland	R	10- 2-97
Dingman, Jas. O.	Linden	R	7-17-97	Straughan, Jno. W.	Parkersburg	R	8-28-97
Duncan, Jos. R.	Crawfor'sville	E	7-14-97	Talbott, Jesse N.	Crawfor'sville	R	7-16-97
Dunnington, R. C.	Darlington	R	8-12-97	Taylor, Jno. N.	Crawfor'sville	H	7-15-97
Edgingfield, G. W.	Mace	R	7-15-97	Tilney, Wm. D.	Crawfor'sville	E	12-28-97
Engleman, L. P.	Linden	R	10-20-97	Utter, J. A.	Crawfor'sville	H	10-26-97
Ensminger, S. L.	Crawfor'sville	R	7-16-97	VanCleave, C. L.	Wingate	E	8- 6-97
Etter, J. B.	Crawfor'sville	R	7-22-97	Walden, C. H.	New Market	R	8-10-97
Fall, W. D.	Whitesville	R	8-11-97	Ware, Wm. H.	Bowers	R	7-29-97
Gott, Wm. T.	Crawfor'sville	H	7- 8-97	Washburn, D. M.	New Richmond	R	7-28-97
Greene, W. H.	Darlington	R	7-13-97	Webb, W. P.	Yountsville	R	8- 6-97
Greene, Henry E.	Crawfor'sville	R	7-19-97	Whitenack, J. H.	Crawfor'sville	R	10- 6-97
Griffith, M. E. H.	Crawfor'sville	R	*	Williams, Geo. T.	Browns Valley	R	7-17-97
Griffith, Thos. J.	Crawfor'sville	R	*	Wilson, Jno. B.	Ladoga	R	8-16-97
Hamilton, A. N.	Waynetown	R	7-23-97	Young, Dudley	Pawnee	R	8-10-97

r - Regular, 65; Eclectic, 8; Homeopathic, 5. Total, 78.

Morgan County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Banta, Wm. C.	Martinsville	R.	7-14-97	Lindley, C. M.	Brooklyn	R.	7-21-97
Blackstone, B. D.	Martinsville	R.	7-9-97	Mackenzie, D. W.	Waverly	R.	8-11-97
Brackney, M. F.	Mooreville	R.	7-21-97	Maxwell, J. H.	Martinsville	R.	8-12-97
Branham, J. M.	Paragon	R.	7-14-97	McCormick, M. S.	Eminence	R.	8-2-97
Coonfield, W. M.	Monrovia	R.	9-9-97	Miller, G. W.	Martinsville	R.	8-30-97
Cure, Hiram W.	Martinsville	R.	7-14-97	Monical, G. S.	Martinsville	R.	7-14-97
Divens, C. W.	Wilber	R.	7-19-97	Murphy, W. H.	Morgantown	R.	7-17-97
Farr, U. H.	Martinsville	R.	7-14-97	O'Brien, T. J.	Hall	R.	8-17-97
Gillopsy, F. P.	Monrovia	R.	12-30-97	Prather, Wm. E.	Mahalasville	R.	7-17-97
Gravis, C. M.	Martinsville	R.	7-14-97	Reagan, A. W.	Mooreville	R.	7-19-97
Green, E. V.	Martinsville	R.	7-14-97	Robbins, Clark	Mooreville	R.	7-19-97
Griffitt, Reuben C.	Morgantown	R.	7-17-97	Robinson, H. C.	Martinsville	R.	7-21-97
Griffitt, H. J.	Morgantown	R.	7-17-97	Schofield, S. H.	Martinsville	R.	7-17-97
Grim, J. G.	Waverly	R.	7-19-97	Seaton, Charles	Martinsville	R.	7-15-97
Hendricks, W. E.	Martinsville	R.	8-7-97	Sims, J. A.	Alaska	R.	9-17-97
Henson, Theo.	Martinsville	R.	7-17-97	Sweet, E. M.	Martinsville	R.	8-27-97
Holaday, T. F.	Mooreville	R.	7-19-97	Terrell, Wm. H.	Hall	R.	11-17-97
Horton, Ellis	Monrovia	R.	7-20-97	Thompson, W. L.	Mooreville	R.	7-16-97
Horton, F. W.	Monrovia	R.	7-20-97	Tilford, B. W.	Martinsville	R.	7-16-97
Hubbard, W. H.	Monrovia	R.	7-20-97	Tilford, A. S.	Martinsville	R.	7-19-97
Jackson, E. J.	Linton	R.	"	Turner, Jas. A.	Martinsville	R.	"
Jones, H. C.	Hall	R.	8-24-97	VanSandt, W. P.	Brooklyn	R.	7-30-97
Keegan, M. B.	Martinsville	R.	"	Webster, E. C.	Martinsville	R.	9-21-97
Kelso, E. E.	Eminence	R.	8-13-97	Wellins, Sarah E.	Martinsville	R.	7-17-97
Kennedy, D. P.	Martinsville	R.	7-15-97	Wharton, J. O.	Exchange	R.	9-11-97
Kennedy, John	Paragon	NC	7-22-97	Willan, L. C.	Morgantown	R.	7-17-97
Kessinger, G. A.	Martinsville	R.	7-31-97	Williams, K. H.	Cope	R.	7-17-97
Knight, J. H.	Morgantown	R.	7-17-97	Williamson, R. B.	Paragon	R.	9-8-97

Regular, 52; Eclectic, 3; not classed, 1. Total, 56.

Newton County.

Boice, B. R.	Kentland	H.	7-15-97	Marry, J. W.	Mount Ayr	R.	8-4-97
Caldwell, S. N.	Mount Ayr	H.	8-4-97	McCaun, R. C.	Kentland	R.	8-7-97
Clymer, K.	Goodland	E.	"	Miller, C. A.	Kentland	R.	6-28-97
Collier, T. E.	Brook	R.	8-13-97	Pratt, B. W.	Goodland	R.	12-1-97
Crisler, J. B.	Brook	R.	8-13-97	Reacher, L. H.	Morocco	R.	10-14-97
Cronk, Fremont	Goodland	R.	"	Salisbury, W. H.	Morocco	R.	"
Dixon, Z. C.	Goodland	NC	9-3-97	Scott, Wm. F.	Kentland	R.	8-25-97
Godfrey, L. M.	Kentland	H.	7-22-97	Smith, H. Karl	Morocco	R.	8-31-97
Hatch, J. A.	Kentland	R.	7-15-97	Smith, George B.	Brook	R.	10-9-97
Humston, M. L.	Goodland	R.	7-26-97	Triplett, C. E., Sr.	Morocco	NC	12-1-97
Leedom, H. F.	Morocco	R.	10-20-97	Triplett, C. E., Jr.	Morocco	R.	12-1-97
Leeson, Ernest	Rose Lawn	R.	10-11-97	Wescott, Jos. B.	Goodland	H.	10-11-97
Lovett, John A.	Goodland	R.	12-1-97				

Regular, 18; Eclectic, 1; Homeopathic, 4; not classed, 2. Total, 25.

Noble County.

Bowker, J. J.	La Otto	R.	10-29-97	Mitchell, W. K.	Ligonier	R.	8-2-97
Carver, Walter F.	Albion	R.	7-14-97	Moore, N. B.	Merriman	R.	7-19-97
Coynes, A. G.	Kendallville	R.	7-26-97	Morr, J. W.	Albion	R.	12-6-97
Depew, Ezra A.	Wolf Lake	E.	7-12-97	Moses, H. C.	Kendallville	R.	7-28-97
Dunlap, Robt.	Kendallville	E.	7-30-97	Nifer, J.	Brimfield	W.	7-22-97
Franks, Wm. H.	Ligonier	R.	9-10-97	Reiff, N. G.	Albion	H.	7-15-97
Gants, John	Cromwell	E.	"	Reynolds, F. A.	Kendallville	R.	"
Geierman, Wm. H.	Rome City	R.	7-30-97	Schlottberger, E. L.	Ligonier	R.	9-8-97
Gilbert, J. L.	Kendallville	R.	7-26-97	Seymour, C. A.	Wawaka	R.	*10-97
Goodwin, C. B.	Rome City	R.	8-2-97	Shobe, W. A.	Ligonier	R.	12-15-97
Green, Thos. C.	Albion	R.	7-15-97	Shook, N. J.	Kendallville	R.	10-20-97
Green, Wm. T.	Albion	R.	7-15-97	Simon, Joshua	Avilla	E.	11-22-97
Hardey, C. F.	Kendallville	R.	7-23-97	Smith, J. F.	Rome City	E.	9-25-97
Hays, Jno. W.	Albion	R.	8-20-97	Stroup, G. A.	Rome City	R.	7-24-97
Holloway, J. C.	Ligonier	H.	8-12-97	Teal, Geo. A.	Kendallville	R.	8-20-97
Johnson, W. A.	Wawaka	NC	7-21-97	Tear, Norman	Kendallville	R.	7-27-97
Kester, A. A.	Wolcottville	H.	8-5-97	Tucker, H. G.	Cromwell	R.	10-26-97
Knepper, E. W.	Ligonier	R.	8-20-97	Vazay, W. M.	Avilla	R.	7-19-97
Lemmon, S. W.	"	R.	8-12-97	Whippy, Geo. A.	Ligonier	H.	9-8-97
Luckey, James E.	Wolf Lake	R.	"	William, W. S.	Kendallville	R.	7-26-97
Maloney, F. C.	Avilla	R.	8-12-97	Wilson, D. C.	Kendallville	E.	10-12-97
Miller, B. E.	Albion	R.	7-15-97	Woodruff, G. S.	Ligonier	E.	8-6-97

Regular, 31; Eclectic, 7; Homeopathic, 5; not classed, 1. Total, 44.

Ohio County.

Name.	Residence.	School.	Date of County License.
Elfers, John	Rising Sun	R.	7-15-97
Fulker, W. H.	Bear Branch	R.	8-5-97
Miller, J. B.	Hartford	R.	8-2-97
Rockafellow, W. A.	Laughery	E.	7-20-97

Name.	Residence.	School.	Date of County License.
Simpson, R. G.	Rising Sun	R.	8-19-97
Smith, Benj. R.	Guionsville	R.	12-1-97
Stevenson, Geo. A.	Rising Sun	R.	7-19-97

Regular, 6; Eclectic, 1. Total, 7.

Orange County.

Beaty, G. S.	Helix	R.	*
Bell, J. L.	French Lick	R.	8-12-97
Boyd, Chas. L.	Paoli	R.	8-5-97
Brady, John A.	Orleans	R.	7-14-97
Carter, T. P.	Orangeville	R.	8-11-97
Faulkner, J. F.	French Lick	R.	7-2-97
Gibbons, John A.	Paoli	R.	*
Gilliatt, Wm. B.	Youngs Creek	R.	11-22-97
Hazlewood Green	Chambersburg	R.	9-18-97
Holaday, R. L.	Newt. Stewart	R.	9-6-97
Howard, J. L.	French Lick	R.	9-11-97
Hunt, F. P.	Leipsic	R.	7-31-97
Johnson, John R.	Obi	E.	*
Kochenour, W. P.	Rego	R.	8-14-97
Lang, John W.	Valeene	R.	7-23-97
Laughlin, E. D.	Orleans	R.	7-21-97
Laughlin, C. E.	Orleans	R.	8-7-97

Lindley, Labon	Paoli	R.	8-6-97
Lingle, R. W.	Orleans	R.	10-27-97
Luckett, E. R.	French Lick	R.	7-17-97
McCarty, W. T.	Orleans	R.	*
McDonald, John	Valeene	R.	8-4-97
Montgomery, J. W.	Paoli	R.	7-8-97
Patton, W. H.	Orleans	R.	9-23-97
Pennington, W. D.	French Lick	R.	7-16-97
Ritter, H. O.	Orangeville	R.	7-2-97
Ritter, John A.	West Baden	R.	8-17-97
Ritter, T. B.	Orangeville	R.	7-27-97
Ryan, Wm. E.	French Lick	R.	7-19-97
Sherrod, Wm. F.	West Baden	R.	8-17-97
Smith, E. A.	Newt. Stewart	R.	9-3-97
Stewart, O. H.	Syria	H.	7-19-97
Tolliver, J. A.	Abydell	R.	8-27-97
Workman, W. S.	Bromer	NC.	8-12-97

Regular, 31; Eclectic, 1; Homeopathic, 1; not classed, 1. Total, 34.

Owen County.

Coble, Jacob	Spencer	R.	7-14-97
Cox, N. D.	Spencer	R.	7-17-97
Denke, Walter W.	Spencer	R.	7-15-97
Erskine, Amos C.	Hauertown	R.	9-7-97
Fisher, B. F.	Quincy	R.	8-9-97
Fox, H. A.	Gosport	R.	7-18-97
Gantz, Thos.	Freedon	R.	7-17-97
Gray, Oliver F.	Spencer	R.	7-19-97
Hickam, Wilford	Spencer	R.	7-27-97
Hinkle, J. S.	Coal City	NC.	7-26-97
Hixon, Wm. H.	Farmer	E.	7-16-97
Jones, J. M.	Catawba	E.	7-21-97
Livingstone, J. J.	Freeman	E.	9-4-97
Maddox, W. B. S.	Vandalia	R.	7-17-97
McDonald, D. H.	Quincy	R.	7-19-97
McIntosh, J. P.	Spencer	E.	7-17-97

McKelvey, S. R.	Gosport	R.	*
Mullinnix, E. N.	Spencer	E.	*
Osgood, H. G.	Gosport	E.	7-19-97
Pierson, Allen	Spencer	R.	7-15-97
Plew, J. H.	Freedom	E.	7-17-97
Pritchard, C. A.	Gosport	R.	7-21-97
Rice, Wm. H.	Cuba	R.	7-26-97
Richards, S. D.	Patricksburg	R.	7-24-97
Schell, F. A.	Spencer	E.	7-16-97
Sloan, Jno. N.	Patricksburg	R.	7-20-97
Smith, Jno. W.	Gosport	R.	7-21-97
Stucky, Fred V.	Gosport	R.	7-21-97
Stucky, M.	Gosport	R.	7-21-97
VanHorn, Jno. R.	Coal City	E.	7-26-97
Wooden, Jerry	Gosport	R.	7-21-97
Yocum, Boaz	Quincy	R.	7-19-97

Regular, 23; Eclectic, 8; not classed, 1. Total, 32.

Parke County.

Allport, Jno. E.	Montezuma	R.	*
Baldridge, R. A.	Coxville	E.	7-24-97
Baldridge, E. R.	Coxville	E.	7-24-97
Benell, Chas.	Diamond	R.	9-3-97
Boyd, James M.	Annapolis	R.	*
Caplinger, C. A.	Marshall	R.	7-21-97
Cone, James	Montezuma	H.	10-15-97
Crooks, James	Bridgeton	R.	9-27-97
DeVerter, Geo. T.	Waterman	R.	8-24-97
Dooley, Rufus L.	Rockville	R.	8-14-97
Evans, E. M.	Mocca	H.	8-4-97
Garrigus, Jno. J.	Tangier	R.	7-16-97
Gillum, Wm.	Rockville	R.	7-21-97
Goldsberry, J. A.	Bloomingsdale	R.	7-21-97
Goss, Marion	Rockville	R.	7-15-97
Hicks, J. R.	Tangier	R.	7-31-97
Hudson, Benj. F.	Montezuma	R.	7-21-97
Lynch, J. Y.	Rosedale	R.	8-9-97

Malloy, A. F.	Bridgeton	R.	9-10-97
Martin, Alonzo	Bellmore	R.	8-18-97
Mater, J. D.	Bridgeton	R.	8-23-97
McKay, R. H. W.	Lucks Springs	R.	7-30-97
Morris, C. C.	Rockville	R.	7-23-97
Morris, A. W.	Rockville	R.	7-14-97
Norman, Jas. I.	Parkville	R.	8-24-97
O'Dell, J. L.	Catlin	E.	7-17-97
Pearce, R. C.	Bellmore	R.	7-24-97
Powell, B. B.	Marshall	E.	7-31-97
Price, Wm. S.	Tangier	R.	9-4-97
Randall, Edwin	Judson	R.	8-12-97
Reeder, J. C.	Montezuma	E.	7-24-97
Stewart, H. W.	Rosedale	R.	7-16-97
Vanceave, E. L.	Rockville	R.	7-9-97
Welch, Jno. A.	Lena	R.	12-7-97
Woody, George C.	Annapolis	R.	7-24-97

Regular, 28; Eclectic, 5; Homeopathic, 2. Total, 35

Perry County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Adye, Andrew J.	Adyeville	R.	7-30-97	Hutchinson, R. H.	Cannelton	R.	10-20-97
Bacon, J. D.	Troy	R.	*	Ladd, C. W.	Cannelton	NC	8-5-97
Bennett, J. B.	Derby	R.	8-5-97	Lee, J. H.	Rome	NC	7-23-97
Brucker, C. M.	Tell City	R.	7-21-97	Lomax, Wm. L.	Bristow	R.	9-7-97
Cannavan, J. W.	St. Croix	R.	8-23-97	Mason, C. H.	Tell City	R.	7-16-97
Cluthe, Wm.	Tell City	R.	7-15-97	May, Vance.	Troy	R.	7-22-97
Cox, C. E.	Cannelton	R.	*	McAdams, L. C. C.	Leopold	R.	7-29-97
Dome, D. C.	Troy	R.	10-14-97	Muehbi, Wm. H.	Tell City	R.	7-7-97
Eads, Thos. L.	Cannelton	R.	7-22-97	Ripperdam, J. H.	Roanoke	R.	8-30-97
Hargis, W. T.	Derby	R.	8-3-97	Schriefer, J. H.	Prospero	R.	9-8-97
Hendershot, C. T.	Cannelton	R.	*	Speedy, W. S.	Branchville	R.	7-29-97
Henric'son, A. M. D.	Rono	R.	*	Webb, J. R.	Troy	E.	9-4-97
Howard, D. W. R.	Lilly Dale	NC	11-13-97	Wedding, M. F.	Rome	R.	7-23-97

Regular, 22; Eclectic, 1; not classed, 3. Total, 26.

Pike County.

Adams, Jas. R.	Petersburg	R.	12-6-97	Hilsmeyer, F. E.	Velpen	R.	7-22-97
Bassinger, J. H.	Oatsville	NC	7-13-97	Honeycutt, W. J.	Littles	E.	8-9-97
Bassinger, T. W.	Petersburg	R.	7-15-97	Hunter, W. M.	Petersburg	R.	7-16-97
Beardsley, J. N.	Winslow	R.	7-21-97	Imal, E. S.	Algiers	R.	7-28-97
Bergen, J. S. W.	Petersburg	R.	7-22-97	Ireland, Geo. L.	Winslow	R.	8-11-97
Bethell, Wm. J.	Winslow	E.	7-13-97	Kime, J. T.	Petersburg	R.	7-16-97
Blythe, Wm. T.	Glezen	R.	8-20-97	LaMar, I. H.	Petersburg	E.	8-2-97
Burger, John R.	Petersburg	R.	7-24-97	Link, W. H.	Petersburg	R.	7-16-97
Burlingame, E. G.	Arthur	R.	7-17-97	McGlosson, T. D.	Augusta	E.	*
Chumbley, S. B.	Arthur	R.	8-12-97	McGraw, Wilson	Ayrshire	E.	8-13-97
Clark, S. R.	Otwell	R.	8-3-97	Miller, Marg't N.	Velpen	R.	*
Coleman, John W.	Union	R.	8-4-97	Osborn, Wm. R.	Spurgeon	E.	8-6-97
Corn, Nathan	Petersburg	R.	7-19-97	Pagin, H.	Velpen	E.	*
DeMott, W. M.	Otwell	R.	11-3-97	Rhodes, A. J.	Pikeville	R.	8-14-97
DeTar, David	Winslow	R.	7-22-97	Rice, T. R.	Petersburg	H.	9-11-97
Felch, E. P.	Monticello	H.	*	Rice, T. W.	Petersburg	R.	8-5-97
Hamilton, J. S.	Arthur	E.	10-16-97	Russell, W. H.	Oatsville	R.	7-17-97
Harris, R. W.	Algiers	R.	7-31-97	Schenck, H. F.	Oatsville	R.	7-17-97
Harrison, Jas. A.	Spurgeon	R.	7-26-97	Smith, Wm. H.	Glezen	R.	8-18-97
Hatfield, Benj. F.	Union	R.	9-9-97	Smith, John T.	Glezen	R.	*
Hilsmeyer, L. H.	Stendal	R.	7-16-97	Stork, J. H.	Stendal	R.	7-16-97
				Waterhouse, T. W.	Petersburg	E.	12-21-97

Regular, 32; Eclectic, 7; Homeopathic, 2; not classed, 1. Total, 42.

Porter County.

Beer, H. M.	Valparaiso	NC	7-7-97	Loring, D. J.	Valparaiso	NC	7-10-97
Blount, R. D.	Whe ler	R.	7-7-97	McCarthy, J. F.	Valparaiso	R.	7-8-97
Boner, M. C.	Hebron	R.	7-7-97	McMichael, O. W.	Wheeler	R.	*
Callahan, B. J.	Chesterton	R.	7-7-97	Noland, P. D.	Kouts	R.	7-12-97
Carson, Joseph	Valparaiso	R.	7-7-97	Pagel, Chas. W.	Hebron	E.	7-12-97
Edmonds, E. A.	Hebron	H.	*	Pagin, Samuel	Valparaiso	E.	7-12-97
Elliott, Levi W.	Valparaiso	H.	9-1-97	Rubin, Barney	Chesterton	R.	7-12-97
Fre-man, B. B.	Valparaiso	H.	7-9-97	Ryan, John A.	Valparaiso	E.	7-12-97
Green, H.	Chesterton	R.	7-9-97	Sassaman, F. W.	Boon Grove	R.	7-13-97
Johnston, C. H.	Chesterton	R.	7-10-97	Vincen, J. A.	Valparaiso	NC	7-12-97
Ketchum, F. G.	Valp-raiso	H.	7-10-97	Wilson, J. R.	Hebron	R.	7-12-97
Krausgrill, D.	Chesterton	R.	7-9-97	Wood, O. S.	Valparaiso	E.	7-12-97
Letherman, A. P.	Valparaiso	R.	7-10-97	Yohn, E. F.	Hebron	R.	7-10-97

Regular, 15; Eclectic, 4; Homeopathic, 4; not classed, 3. Total, 26.

Posey County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Auburn, Chas.	Wadesville	R	7-10-97	Murphy, C. F.	Griffin	R	10-25-97
Baldwin, W. H.	Oliver	R	7-17-97	Neal, Dan'l.	New Harmony	R	7-22-97
Bell, A. W.	W. Franklin	R	9-11-97	Neal, B. E.	New Harmony	R	*
Boren, S. W.	Cynthiana	R	8-10-97	Peckinpaugh, G. R.	Mt. Vernon	R	*
Bryden, J. F.	Griffin	R	7-22-97	Powell, Jno. W.	Mt. Vernon	R	7-16-97
Cosby, L. B.	Cynthiana	R	9-1-97	Ramsey, D. C.	Mt. Vernon	R	8-21-97
Creemens, Wm. C.	Grafton	E	7-17-97	Rawlings, S. O.	New Harmony	R	7-22-97
Doerr, Jno. E.	Mt. Vernon	R	7-15-97	Reed, Jno.	Mt. Vernon	E	7-24-97
Elliott, Cyrenus.	Blairsville	R	7-27-97	Runcie, Geo. U.	Poseyville	R	7-21-97
Emmick, T. C.	Mt. Vernon	R	10-23-97	Rutter, Jno.	Cynthiana	E	9-20-97
Flucks, Carl	St. Wendall	R	*	Seits, Jas. R.	W. Franklin	R	*
Fullonwider, C. H.	Mt. Vernon	R	7-15-97	Smith, Geo. C.	Poseyville	R	9-14-97
Glaze, J. M.	New Harmony	R	7-22-97	Smythe, Richard	Mt. Vernon	R	7-16-97
Goodwin, E. J.	Springfield	R	7-27-97	Spencer, E. V.	Mt. Vernon	R	7-15-97
Grim, Simon	St. Philip	R	7-22-97	Suggs, H. H.	Mt. Vernon	E	7-23-97
Gudgel, Jas. E.	Cynthiana	R	9-1-97	Turman, I. L.	Cynthiana	R	9-1-97
Hall, Thos. J.	Mt. Vernon	R	7-15-97	Watt, I. C.	Mt. Vernon	R	8-13-97
Hardwick, R. L.	Mt. Vernon	R	6-24-97	Welborn, Geo. W.	Stewartsville	R	11-23-97
Harper, Jno.	Mt. Vernon	R	7-19-97	Welch, D. W.	Mt. Vernon	R	7-19-97
Henderson, S. E.	St. Philip	R	8-2-97	Whiting, U. G.	Wadesville	R	8-19-97
Hensler, E. H. C.	Hensler	R	7-19-97	Williams, Jos. B.	Grafton	R	7-17-97
Hicks, C.	Caborn	R	10-18-97	Wilson, T. W.	New Harmony	R	7-22-97
Hoggatt, W. W.	Oliver	R	7-15-97	Wilson, Rob't E.	New Harmony	R	11-2-97
Holton, Wm. M.	New Harmony	R	7-22-97	Wilson, Jno. B.	Stewartsville	R	8-3-97
Huston, J. C.	Mt. Vernon	R	*				

Regular, 45; Eclectic, 4. Total, 49.

Pulaski County.

Arnold, C. O.	Monterey	PM	8-26-97	Moss, D. F.	Winamac	R	7-29-97
Brown, Stephen I.	Francisville	R	8-3-97	P. gh, Jno. W.	Lakeside	R	7-29-97
Buck, Geo. L.	Star City	PM	7-19-97	Sharrer, Jno. C.	Francisville	R	8-4-97
Conner, Jas. L.	Pulaski	PM	8-1-97	Smith, E. G.	Winamac	R	7-23-97
Green, Jno. W.	Winamac	R	10-5-97	Stephens, H. C.	Star City	PM	8-2-97
Hall, S. Jerome.	Ora	PM	8-12-97	Thomas, Jno. J.	Winamac	R	7-16-97
Jones, H. G.	Medaryville	R	10-25-97	Thompson, G. W.	Winamac	R	7-16-97
Jones, Jay	Medaryville	R	9-25-97	Thompson, W. H.	Winamac	R	7-29-97
Kelly, Jno. N.	Winamac	R	*	Vaughn, Martin	Winamac	R	4-18-97
Kittinger, Henry	Winamac	R	7-30-97	Washburn, Geo. W.	Pulaski	E	8-6-97
Moore, C. W.	Medaryville	R	7-22-97				

Regular, 15; Eclectic, 1; Physio-Medical, 5. Total, 21.

Putnam County.

Allen, Chas. A.	N. Maysville	R	7-20-97	King, J. M.	Greencastle	R	7-15-97
Baston, J. V.	Belle Union	R	7-15-97	Lammers, F. H.	Greencastle	R	7-15-97
Bence, Geo. W.	Greencastle	R	7-9-97	Lewis, Geo. F.	Oakalla	R	*
Bilbo, J. W.	Russellville	R	8-30-97	McClure, S. W.	Cloverdale	R	7-17-97
Brasier, Thos. T.	Greencastle	R	7-15-97	Moore, A. H.	Clinton Grove	R	7-16-97
Collier, Richard T.	Roachdale	E	8-2-97	Mullinix, P.	Cloverdale	R	7-17-97
Collins, C. C.	Roachdale	R	7-21-97	New, Y. N.	Barnard	R	7-27-97
Cully, John F.	Bainbridge	R	12-24-97	O'Brien, C. A.	Fillmore	R	8-10-97
Evans, E. B.	Greencastle	R	7-21-97	Preston, Jos. L.	Cloverdale	R	9-4-97
Farver, Geo. W.	Bainbridge	R	7-15-97	Prichard, W. K.	Cloverdale	R	8-9-97
Gillespie, Jos. F.	Reelsville	R	8-9-97	Prichard, R. A.	Cloverdale	R	*
Gray, Emmett E.	Greencastle	R	7-15-97	Robinson, J. H.	Coatesville	R	7-23-97
Hanna, Levi M.	Greencastle	R	7-15-97	Spurgeon, Frank	Mt. Meridian	R	8-12-97
Harris, W. C.	Roachdale	R	7-21-97	Stanley, Logan	Fine stile	R	8-27-97
Harvey John W.	Russellville	R	7-29-97	Steele, Wm. D.	Morton	R	10-8-97
Hawkins, Eugene	Greencastle	R	7-14-97	Stroube, C. N.	N. Maysville	R	7-29-97
Heskett, W. C.	Roachdale	R	7-29-97	Summers, Wm. F.	Raccoon	R	12-17-97
Hill, W. D.	Greencastle	H	7-15-97	Taylor, Mary J.	Greencastle	H	12-30-97
Horn, Amos H.	Putnamville, NC.	R	7-15-97	Throop, Geo. A.	Greencastle	R	7-16-97
Hutcheson, W. R.	Greencastle	R	*	Tucker, W. W.	Greencastle	R	7-15-97
Jacks, J. R.	Port'd Mills	E	7-17-97	Wiseheart, W. H.	Groveland	R	*
James, C. S.	N. Maysville	PM	7-27-97	Wright, U. A.	Mt. Meridian	R	*

Regular, 38; Eclectic, 2; Homeopathic, 2; Physio-Medical, 1; not classed, 1. Total, 44.

Randolph County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Abell, Oscar E.	Trenton	R.	7-10-97	Hunt, B. S.	Winchester	R.	7-15-97
Adams, Josiah F.	Winchester	P.M.	7- 7-97	Innis, R. E.	Parker City	N.C.	*
Bearchamp, H. W.	Arba	P.M.	8- 4-97	Johnson, E. W.	Union City	R.	*
Beck, I. E.	New Pittsburg	R.	7-17-97	Jordan, DeWitt	Ridgeville	R.	7-19-97
Berry, N. D.	Spartanburg	R.	7-17-97	Markle, G. C.	Winchester	R.	7-14-97
Berry, J. S.	Spartanburg	R.	7-27-97	Markle, Jno. E.	Winchester	R.	7-14-97
Bosworth, Rich'd	Winchester	R.	7-14-97	McCormick, W. D.	Modoc	R.	8- 7-97
Botkins, Thos. W.	Union Port	R.	7-24-97	McFarland, N.	New Pittsburg	E.	8-21-97
Botkins, J. W.	Union Port	E.	9-25-97	McWhinney, B. P.	Union City	E.	7-15-97
Carver, J. N.	Winchester	R.	9- 8-97	Miller, A. J.	Winchester	R.	*
Chenoweth, J. T.	Winchester	R.	7-14-97	Milligan, C. E.	Winchester	P.M.	7-17-97
Chenoweth, F. A.	Winchester	R.	7-14-97	Morgan, T. W.	Spartanburg	R.	7-29-97
Chenoweth, N. T.	Windsor	R.	8- 3-97	Moroney, J. H.	Lynn	R.	7-15-97
Clapper, David	Farmland	H.	7-15-97	Nixon, Jno.	Farmland	R.	*
Coffin, A. W.	Carbon City	E.	9- 7-97	Noffinger, Henry	Union City	E.	7-16-97
Commons, Wm.	Union City	R.	7-21-97	Owen, Jno. K.	Harrisville	R.	7-20-97
Cox, C. R.	Lynn	R.	7-21-97	Proctor, J. A.	Union City	R.	10-19-97
Cromer, L. G.	Union City	R.	10-12-97	Purcell, Sarah	Randolph St'n R.	*	
Current, O. E.	Farmland	R.	8-13-97	Reeves, Jno. L.	Union City	E.	8-26-97
Davis, Lewis N.	Farmland	R.	8-13-97	Reynard, G.	Union City	R.	7-15-97
Evans, C. S.	Union City	R.	8-11-97	Reynard, E. G.	Union City	R.	7-15-97
Evans, J. J.	Winchester	R.	7-14-97	Rogers, A. G.	Parker	R.	7-29-97
Farquhar, A. H.	Ridgeville	N.C.	8-12-97	Ruby, Samuel B.	Union City	R.	7-15-97
Fisher, M. L.	Winchester	P.M.	7-15-97	Simmons, Wm. D.	Union City	E.	7-22-97
Fraiks, H. P.	Losantville	R.	8-17-97	Smith, Calvin	Farmland	E.	7-16-97
Fredrick, G. W.	Ridgeville	R.	10-22-97	Smith, A. D.	Winchester	R.	*
Gustin, Francis M.	Union City	H.	9-21-97	Snodgrass, B. K.	Union City	P.M.	7-14-97
Harrison, Harlan	Union City	E.	7-27-97	Spitler, C. E.	Saratoga	R.	7-15-97
Hastings, A. H.	Winchester	H.	7-20-97	Thompson, G. W.	Union City	E.	7-27-97
Hattery, A. H.	Parker City	R.	*	Tisor, Wm. R.	Rural	R.	7-17-97
Hiatt, Jno. A.	Ridgeville	E.	8-23-97	Vanderburg, J. M.	Parker	E.	7-27-97
Hiatt, C. C.	Winchester	E.	7-29-97	Walker, Wm. H.	Winchester	R.	7-19-97
Hinshaw, Wm. H.	Bartonia	P.M.	7-17-97	Welbourne, E. L.	Union City	E.	9- 8-97
Huddleston, A. F.	Winchester	H.	7-15-97	Wiggins, D. S.	Losantville	R.	8- 4-97

Regular, 42; Eclectic, 14; Homeopathic, 4; Physio-Medical, 6; not classed, 2. Total, 68.

Ripley County.

Anderson, Jas.	Versailles	R.	7- 9-97	Miller, R. H.	Cross Plains	R.	7-21-97
Bradley, Jas. T.	Cross Plains	R.	8- 9-97	Newforth, C.	Sunman	R.	8- 7-97
Brenton, T. M.	Osgood	N.C.	7-29-97	Olmstead, R. T.	Versailles	R.	7-15-97
Brown, C. M.	New Marion	R.	8- 5-97	Parsons, G. E.	Milan	E.	7-23-97
Cass, C. H.	Holton	R.	7-22-97	Pate, J. R.	Milan	R.	7-21-97
Coomes, M. J.	Rexville	R.	8- 2-97	Payne, T. H.	Delaware	R.	7-19-97
Cox, L. T.	Napolen	R.	7-21-97	atcliff, J. T.	Morris	R.	7-29-97
Cox, Jacob G.	Holton	R.	8-20-97	Redlon, D. M.	Pierceville	R.	9- 1-97
Davis, Jas. R.	Batesville	R.	8- 7-97	Roberts, Jeremiah	Holton	R.	10-21-97
Freeland, Jno. P.	Sunman	R.	8- 7-97	Robinson, Jno. M.	Versailles	R.	8- 4-97
Freeman, E. D.	Osgood	R.	7-29-97	Roney, D. C.	Pierceville	R.	7-22-97
Gibson, Chas. W.	Morris	R.	8- 6-97	Sweezy, Jno. M.	Cross Plains	R.	8- 9-97
Hess, J. N.	New Marion	R.	9- 9-97	Tinnermann, E.	Batesville	R.	7-17-97
Hicks, J. C.	Napoleon	P.M.	7-19-97	Townsend, R. C.	Osgood	R.	7-29-97
Holbert, Wm. M.	Elrod	R.	8-13-97	Townsend, S. B.	Milan	R.	9-21-97
Jones, J. G.	Versailles	R.	7-31-97	Veazey, T. R.	Milan	N.C.	8-12-97
Joseph, E. P.	Osgood	R.	7-29-97	Vincent, E. B.	Sunman	R.	8-17-97
Joseph, A. F.	Osgood	R.	7-29-97	Williams, C. F.	Batesville	H.	7- 7-97
Kremer, F. M.	St. Magdalene	R.	7-28-97	Ziteke, J. F.	Batesville	R.	8- 7-97
Lamb, J. F.	Delaware	E.	8-16-97				

Regular, 33; Eclectic, 2; Homeopathic, 1; Physio-Medical, 1; not classed, 2. Total, 39.

Rush County.

Barnum, Wm. E.	Manilla	N.C.	10-13-97	Elliott, H. H.	Glenwood	R.	7-31-97
Behr, E. D.	Rushville	R.	7-14-97	Gilbert, Chas. H.	Rushville	H.	7-15-97
Bell, H. J.	Mays	R.	7-15-97	Gordon, Wm. S.	Raleigh	P.M.	7-23-97
Bowen, J. F.	Occident	R.	10- 6-97	Green, Lot.	Rushville	R.	7-28-97
Burkin, Ezra	Carthage	P.M.	7-14-97	Green, Frank H.	Rushville	R.	7-14-97
Coffin, Orlando S.	Carthage	E.	8-13-97	Green, J. D.	Manilla	R.	10-25-97
Cregor, F. W.	Carthage	R.	7-27-97	Hackleman, F. G.	Rushville	R.	7-15-97
Dean, D. H.	Rushville	H.	7-17-97	Hall, Alfred S.	Arlington	R.	7-15-97
Dillon, J. C.	Rushville	R.	8- 7-97	Houghland, C. S.	Milroy	R.	10-29-97
Dillon, O. P.	Rushville	R.	10-19-97	Hudelson, L. R.	Richland	R.	7-26-97

Rush County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Johnston, Wm. A.	Falmouth	R.	7-19-97	Paxton, E. J. T.	Glenwood	R.	7-31-97
Jones, J. H.	Carthage	E.	10-16-97	Porter, W. J.	Carthage	NC	12-30-97
Jones, Geo. B.	Rushville	R.	7-21-97	Rea, Charles L.	Falmouth	R.	7-21-97
Kennedy, Donald Homer	Homer	R.	7-21-97	Rucker, T. H.	Arlington	R.	7-22-97
Lampton, Wm. T.	Milroy	R.	7-23-97	Sexton, Jno. C.	Rushville	R.	12-30-97
Lewis, Jno. G.	Rushville	H.	7-15-97	Sipe, Jno. A.	Carthage	R.	8-2-97
Linn, H. G.	Rushville	H.	8-12-97	Smith, Frank.	Arlington	R.	8-10-97
Logan, H. V.	New Salem	R.	7-30-97	Smith, Wm. H.	Rushville	R.	7-14-97
Lowden, L. A.	Manilla	R.	10-28-97	Smith, Wm. C.	Rushville	R.	7-14-97
McGaughey, J. E.	Arlington	R.	7-15-97	Smallen, C. H.	Raleigh	R.	7-28-97
Megee, Wm. N.	Rushville	R.	8-27-97	Spurrier, J. H.	Rushville	R.	7-16-97
Megee, Omar	Rushville	R.	7-15-97	Tavis, J. L. W. L.	Moscow	R.	7-23-97
Metcalf, H. P.	Mays	R.	7-26-97	Thomas, S. C.	Milroy	R.	8-2-97
Mottett, Jno.	Rushville	R.	7-19-97	Wilcox, Harry E.	New Salem	R.	9-18-97
Parsons, C. H.	Rushville	R.	7-15-97	Wooden, E. I.	Rushville	R.	7-15-97

Regular, 39; Eclectic, 2; Homeopathic, 5; Physio-Medical, 2; not classed, 2. Total, 50.

Scott County.

Biery, T. E.	Scottsburg	R.	7-14-97	McClain, W. L.	Scottsburg	R.	*
Blocher, J. B.	Blocher	R.	9-8-97	McLain, Levi	Scottsburg	R.	7-16-97
Casey, H. R.	Austin	R.	9-9-97	Murphy, O. C.	Scottsburg	R.	12-10-97
Davis, Wm. H.	Lexington	E.	7-29-97	Sarver, John A.	Blocher	R.	7-19-97
Green, Wm. E.	Lexington	E.	7-19-97	Sarver, Fred. C.	Blocher	R.	9-8-97
Houghl'd, M. E. M.	Vienna	R.	7-22-97	Tammadge, H.	Austin	R.	7-17-97
Kendall, A. P.	Austin	R.	*	Tichenor, J. B.	Nobbs Station	R.	8-6-97
Lathrop, A. H.	Lexington	R.	7-21-97	Warmoth, Geo. M.	Scottsburg	R.	7-24-97

Regular, 14; Eclectic, 2. Total, 16.

Shelby County.

Abernethy, A. A.	Morristown	PM	8-9-97	McCain, T. J.	Waldron	R.	8-5-97
Adams, Ovid L.	Shelbyville	R.	7-19-97	McCray, R. S.	Morristown	R.	8-9-97
Aurin, Emil C.	Shelbyville	E.	7-8-97	McFadden, W. G.	Shelbyville	R.	7-15-97
Baird, A. Q.	Shelbyville	R.	8-10-97	Miller, E. B.	Fountaintown	R.	7-17-97
Bentley, Wm. R.	Morristown	H.	8-9-97	Morris, A. B.	Shelbyville	R.	12-22-97
Black, Frank B.	Bengal	E.	7-15-97	Norton, Thos. J.	Marietta	R.	7-13-97
Booher, Daniel	Noah	R.	7-10-97	Norton, Wm. J.	Flat Rock	R.	8-26-97
Boone, B. H.	Boggestown	R.	8-9-97	Oldham, G. L.	Shelbyville	R.	*
Bowlby, Jos.	Shelbyville	R.	8-17-97	Parrish, J. W.	Fenns	R.	8-14-97
Boyle, W. K.	Waldron	E.	7-24-97	Parrish, J. W.	Shelbyville	E.	7-20-97
Campbell, Frank	Shelbyville	R.	7-14-97	Phares, H. E.	Morristown	R.	*
Carney, J. W.	Kays Crossing	R.	7-14-97	Pierson, W. M.	Fountaintown	R.	7-27-97
Clubb, John W.	Fairland	R.	8-20-97	Pleak, E. H.	Flat Rock	R.	10-27-97
Connolly, H. M.	Flat Rock	R.	7-29-97	Perry, C. H.	Lewis Creek	R.	7-19-97
Cook, C. J.	Gwynneville	R.	7-14-97	Pettigrew, D. A.	Flat Rock	R.	8-14-97
Drake, Morris	Shelbyville	R.	7-14-97	Randolph, D. F.	Waldron	R.	7-17-97
Dunn, C. E.	Shelbyville	E.	7-15-97	Ray, Franklin E.	Fairland	R.	9-3-97
Fleming, Geo. W.	Shelbyville	R.	7-14-97	Rubush, Thos. R.	London	R.	7-17-97
Floyd, R. M.	Shelbyville	R.	7-15-97	Rucker, Jesse W.	Shelbyville	R.	8-21-97
Ford, Walter M.	Mt. Auburn	R.	8-13-97	Sanford, Jas. H.	Shelbyville	R.	8-2-97
Furney, W. C.	Morristown	R.	7-26-97	Sexton, Chas. E.	Fountaintown	R.	*
Green, Will F.	Shelbyville	R.	*	Sherfee, Jas. F.	Fairland	R.	*
Green, Thos. G.	Shelbyville	R.	8-6-97	Shrout, Wm. T.	Blue Ridge	E.	7-23-97
Hannah, J. H.	Boggestown	R.	10-30-97	Shrout, J. W.	Blue Ridge	E.	7-24-97
Hess, M. M.	Morristown	R.	7-28-97	Smith, Wm. A.	Shelbyville	R.	*
Inlow, I. W.	Blue Ridge	R.	7-19-97	Snider, Jno. W.	Fairland	R.	7-15-97
Inlow, Geo. I.	Blue Ridge	R.	7-27-97	Stewart, Jno. B.	Marietta	R.	8-21-97
Jones, Thos. S.	Shelbyville	R.	7-28-97	Stewart, J. K.	Fairland	R.	8-20-97
Keelins, Jas. E.	Sulphur Hill	R.	7-23-97	Strikler, S. L.	Boggestown	R.	7-9-97
Kennedy, T. C.	Shelbyville	R.	7-16-97	Taylor, Jno. F.	Sulphur Hill	R.	7-21-97
Kennedy, Sam'l A.	Shelbyville	R.	7-16-97	Tindall, C. A.	Shelbyville	E.	7-17-97
Kennedy, Sam'l	Shelbyville	R.	9-3-97	Toner, H. M.	Shelbyville	R.	7-27-97
Leech, E. W.	Shelbyville	R.	7-22-97	Tull, E. N.	Fairland	R.	8-12-97
Lowden, Jno.	Carrollton	E.	7-20-97	Washburn, R. R.	Waldron	R.	8-9-97
Lucas, J. N.	Shelbyville	H.	7-20-97	Winter, G. G.	Shelbyville	E.	7-15-97
Maze, Thos. B.	Fairland	R.	7-17-97	Wolf, J. G.	Morristown	R.	7-29-97

Regular, 58; Eclectic, 10; Homeopathic, 2; Physio-Medical, 1. Total, 71.

Spencer County.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Adye, Clarence H.	Patronville.	R.	7-15-97	James, J. B.	Buffaloville.	E.	7-19-97
Adye, G. O. F.	Newtonville.	R.	7-20-97	John B. B.	Gentryville.	E.	8-21-97
Allenbaugh, Huff.	Huff.	R.	7-17-97	Jolly, John C.	Lake.	R.	9-15-97
Anderson, E. M.	Fulda.	R.	*	Jones, Wm. M.	Gentryville.	R.	8-4-97
Baird, J. M.	Eureka.	R.	7-19-97	Jones, C. T.	Gentryville.	R.	9-6-97
Billart, F. W.	Chrisney.	R.	8-6-97	Knox, J. W.	Rockport.	R.	7-22-97
Bryant, W. S.	Dale.	R.	8-14-97	Lang, Jacob.	Rockport.	H.	9-6-97
Bryant, Jas. H.	Gentryville.	R.	8-30-97	Longdon, W. T.	Eureka.	R.	8-6-97
Butler, Jas. M.	Troy.	E.	7-29-97	Lucas, L. R.	Buffaloville.	E.	8-9-97
Buxton, E. J.	Rockport.	R.	7-28-97	Maslowsky, Felix.	Mariah Hill.	R.	*
Clifford, J. W.	Dale.	E.	7-20-97	McClary, D. V.	Dale.	R.	7-17-97
Cramm, C. J.	Lamar.	R.	12-16-97	McCoy, L. H.	Lake.	R.	7-26-97
Critchfield, J. S.	Lamar.	E.	7-27-97	McCoy, Geo. W.	Chrisney.	R.	8-19-97
Dailley, Jas. M.	Rockport.	R.	7-22-97	Sanders, Jas. M.	Gentryville.	E.	7-26-97
Dyer, A. S.	Huffman.	E.	11-30-97	Schweizer, J. J.	Santa Claus.	R.	7-27-97
Ehrman, E. D.	Rockport.	H.	7-24-97	Stuteville, S. W.	Grand View.	R.	8-17-97
Finch, Wm. C.	Grand View.	R.	8-5-97	Tully, Lee H.	Liberal.	R.	*
Foster, A. O.	Newtonville.	E.	12-18-97	Turpin, Jas.	Newtonville.	E.	7-29-97
Gatewood, T. H.	Midway.	R.	*	Wash, Geo. A.	St. Meinrad.	R.	7-19-97
Goble, D. S.	Chrisney.	R.	12-18-97	Wheeler, J. T.	Rockport.	E.	7-15-97
Gwaltney, S. P.	Midway.	E.	7-30-97	White, Arthur.	Rockport.	R.	8-11-97
Hackleman, F. M.	Rockport.	E.	7-14-97	White, H. Q.	Grand View.	R.	10-16-97
Harrison, E. P.	Rockport.	NC.	8-5-97	White, John T.	Grand View.	R.	9-29-97
Herron, Geo. W.	Hatfield.	R.	7-30-97	Williams, W. H.	Dale.	E.	7-23-97
Hunter, S. W.	Chrisney.	R.	8-27-97	Youngblood, E. L.	Lake.	H.	7-17-97

Regular, 32; Eclectic, 14; Homeopathic, 3; not classed, 1. Total, 50.

Starke County.

Abner, J. R.	Grevertown.	PM.	9-6-97	Noland, Wm. A.	North Judson.	R.	8-16-97
Agnew, Thos. J.	Pierre.	R.	9-14-97	Noland, J. F.	Knox.	R.	9-19-97
Bonar, S. S.	Hamlet.	R.	8-12-97	Parker, Albert.	Ora.	E.	8-23-97
Boner, M. H.	Knox.	R.	8-21-97	Pryor, Jas. E.	Knox.	R.	12-22-97
Denaut, J. L.	Hamlet.	R.	11-9-97	Smith, I. M.	Knox.	E.	8-17-97
Englerth, Perry O.	North Judson.	R.	10-6-97	Smith, A. M.	Knox.	PM.	8-11-97
Glazebrook, L. D.	Knox.	R.	8-10-97	Waddell, Chas.	North Judson.	R.	9-1-97
Henderson, A. H.	Knox.	E.	*	Wright, M. R.	Knox.	E.	8-13-97
Mitchell, E. B.	Knox.	R.	8-24-97				

Regular, 11; Eclectic, 4; Physio-Medical, 2. Total, 17.

Steuben County.

Abbott, Lyman.	Fremont.	R.	8-23-97	McLeon, Jas.	Fremont.	R.	8-20-97
Bowen, M. M.	Flint.	R.	7-19-97	Morr, J. E.	Oriand.	R.	9-13-97
Cameron, J. F.	Hamilton.	R.	7-27-97	Nichols, H. A.	Flint.	R.	7-20-97
Creel, Thos. J.	Angola.	R.	7-16-97	Ott, Jas. E.	Ashley.	R.	8-21-97
Cunni'gh'm, H. L.	Salem Centre.	R.	8-4-97	Patchen, D. H.	Fremont.	H.	12-24-97
Dolph, Cassius M.	Pleasant Lake.	R.	8-20-97	Ramsburg, M. V.	Salem Centre.	R.	7-16-97
Dunkel, J. L.	Fremont.	R.	8-20-97	Sherrow, Wm. E.	Helmer.	E.	12-22-97
Fuller, S. H.	Pleasant Lake.	R.	7-19-97	Smith, A. D.	Angola.	H.	7-15-97
Gibbs, O. H.	Hamilton.	E.	7-27-97	Strong, J. A.	Meta.	R.	7-15-97
Goodale, Chas. W.	Meta.	R.	7-22-97	Sutherland, P. N.	Angola.	R.	7-23-97
Green, McK.	Pleasant Lake.	R.	7-15-97	Swobey, Jno. B.	Angola.	R.	7-15-97
Hamilton, F. C.	Hudson.	R.	7-2-97	Taylor, E. A.	York.	R.	7-16-97
Helme, A. M.	Oriand.	R.	7-27-97	Waller, Wm. H.	Angola.	R.	7-17-97
Humphreys, F. B.	Fremont.	R.	9-6-97	Wilkinson, J. J.	Oriand.	R.	7-23-97
Keeslar, Geo.	Oriand.	R.	11-1-97	Williams, Thos. B.	Angola.	R.	7-16-97
Kimmel, A. J.	Hudson.	NC.	9-13-97	Wood, H. D.	Angola.	R.	7-26-97
Lane, W. H.	Angola.	R.	7-16-97	Wood, T. G.	Angola.	R.	7-19-97

Regular, 29; Eclectic, 2; Homeopathic, 2; not classed, 1. Total, 34.

St. Joseph County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Arlington, Jas. W.	Walkerton	R.	9-6-97	McCutcheon, W. C.	Mishawaka	R.	8-6-97
Austin, Griffin	Woodland	R.	7-13-97	McDonald, T. T.	New Carlisle	R.	8-6-97
Barber, A. E.	Mishawaka	R.	7-2-97	McNamora, D. W.	South Bend	R.	7-24-97
Berteling, Jno. B.	South Bend	R.	7-15-97	Miller, A. G.	South Bend	R.	7-19-97
Blume, J. C.	Mishawaka	E.	7-23-97	Mitchell, H. F.	South Bend	R.	7-17-97
Borisowicz, N. G.	South Bend	R.	7-17-97	Modrock, Jno. C.	South Bend	R.	7-28-97
Borley, W. E.	Mishawaka	R.	7-16-97	Montgomery, H. T.	South Bend	R.	11-20-97
Borough, John	Mishawaka	H.	7-16-97	Moore, E. P.	South Bend	R.	7-14-97
Brown, J. R.	Sumpt'n Pr'e	R.	7-17-97	Moore, Allen	North Liberty	R.	8-20-97
Burkett, W. W.	South Bend	R.	7-19-97	Moore, Robert	Lakeville	R.	7-17-97
Butterworth, C. M.	South Bend	R.	7-20-97	Moore, John	Lakeville	R.	7-19-97
Calvert, R. H.	South Bend	R.	9-2-97	Myers, C. H.	South Bend	H.	7-15-97
Camelon, T. P.	Mishawaka	R.	2-97	Osborn, Geo. A.	South Bend	R.	7-179-7
Campbell, A. S.	North Liberty	E.	8-10-97	Osborn, M. A.	South Bend	R.	7-199-7
Cassidy, Jno.	South Bend	R.	7-31-97	Pagin, Lewis	South Bend	E.	7-199-7
Daugherty, C. A.	South Bend	R.	8-7-97	Partridge, J. M.	South Bend	H.	7-27-97
Denaut, H. D.	Walkerton	R.	11-17-97	Pattee, J. J.	South Bend	R.	7-16-97
Denaut, M. S.	Walkerton	R.	9-3-97	Pierce, W. A.	Osceola	R.	7-20-97
Doan, Edgar	Mishawaka	R.	9-3-97	Randolph, Frank	Granger	R.	7-15-97
Drollinger, E. M.	South Bend	E.	12-8-97	Reece, Jas. N.	North Liberty	R.	7-28-97
Dugdale, R. B.	South Bend	R.	8-4-97	Rennoe, Callie A.	South Bend	R.	11-1-97
Dupuis, Eugene L.	South Bend	R.	7-17-97	Rupp, Peter E.	South Bend	R.	7-15-97
Eadman, Fred. P.	South Bend	R.	7-16-97	Sawyer, Frank M.	South Bend	R.	7-15-97
Fink, H. A.	South Bend	R.	11-6-97	Zehafer, A. F.	South Bend	R.	11-15-97
Frank, C. H.	South Bend	H.	12-27-97	Shidler, A. L.	South Bend	R.	7-15-97
Godfrey, Julia D.	South Bend	H.	7-15-97	Slusser, F. B.	South Bend	R.	7-27-97
Greene, Jas. B.	Mishawaka	R.	7-15-97	Snee, H. Boyd	South Bend	R.	7-15-97
Grimes, Jas. F.	Mishawaka, NC.	R.	7-17-97	Stine, R. L.	South Bend	H.	7-15-97
Hager, W. A.	South Bend	R.	7-15-97	Stockwell, S. F.	South Bend	R.	9-6-97
Hansel, Chas. E.	South Bend	R.	8-9-97	Stoltz, Chas.	South Bend	R.	7-21-97
Harris, Robert	South Bend	R.	8-9-97	Terry, C. C.	South Bend	R.	12-20-97
Hill, Mattie I. F.	South Bend	R.	8-17-97	Thomas, Martha V.	South Bend	H.	7-16-97
Hill, G. S.	South Bend	R.	12-28-97	Todd, Samuel G.	Mishawaka	R.	12-28-97
Hill, J. W.	South Bend	R.	7-19-97	Varier, J. A.	South Bend	R.	7-22-97
Holland, M.	Mishawaka	R.	8-6-97	Viton, H. E.	South Bend	E.	7-15-97
Ingleright, A. J.	South Bend, PM	R.	7-20-97	VonScheliha, P. W.	South Bend	H.	8-18-97
Kavle, Jno. D.	South Bend	H.	7-16-97	Waxham, Chas.	North Liberty	R.	7-19-97
Kilmer, S. S.	South Bend	R.	7-21-97	Waynick, J. B.	New Carlisle	R.	7-19-97
Kimball, Lorenia	South Bend	R.	11-15-97	White, Jno. W.	South Bend	R.	10-21-97
Lent, E. J.	Lakeville	R.	7-23-97	Wickham, W. A.	South Bend	R.	7-15-97
Lockwood, W. F.	Wyatt	H.	7-22-97	Wood, W. F.	Mishawaka	R.	10-11-97
Lyon, T. B.	South Bend	R.	8-5-97				

Regular, 66; Eclectic, 5; Homeopathic, 10; Physio-Medical, 1; not classed, 1. Total, 83.

Sullivan County.

Bedwell, T. S.	Dugger	R.	8-3-97	Lowder, C. M.	Dugger	R.	8-4-97
Bennett, J. H.	Farmersburg	E.	8-23-97	Marshall, A. F.	Hymera	R.	8-4-97
Billman, Jas. M.	Sullivan	E.	8-18-97	Martin, F. M.	Oaktown	R.	9-4-97
Briggs, C. F.	Sullivan	R.	7-15-97	Mathes, J. M.	Carlisle	R.	7-8-97
Brown, N. H.	Eagle	E.	8-10-97	McClung, S. Y.	Pleasantville	R.	7-17-97
Crowder, R. H.	Sullivan	R.	7-14-97	McConnell, J. E.	Carlisle	R.	9-21-97
Crowder, Jos. Reed	Sullivan	R.	7-7-97	Miles, Jas.	Merom	R.	8-5-97
Crowley, John B.	Sullivan	R.	7-1-97	Murphy, John S.	Sullivan	R.	7-8-97
Cushman, A.	Graysville	R.	9-12-97	Neff, Jas. H.	Fairbanks	R.	7-12-97
Dailey, Thos. L.	Paxton	E.	7-13-97	Nellans, A. J.	Sullivan	E.	9-1-97
Davis, John W.	Alum Cave	R.	7-9-97	Padgett, Thos. I.	Pleasantville, NC	R.	7-13-97
Davis, N. B.	Sullivan	R.	7-17-97	Parker, O. O.	Merom	R.	7-9-97
DeLaashmatt, V. E.	Shelburn	R.	7-9-97	Phillips, J. L.	Pleasantville	R.	7-13-97
Denison, E. D.	Carlisle	R.	7-9-97	Pirtlo, Geo. W.	Carlisle	R.	8-4-97
Durham, J. L.	Graysville	R.	8-25-97	Plew, G. F.	Hymera	NC	9-2-97
Edwards, C. H.	Sullivan	R.	7-9-97	Sheridan, Anna T.	Sullivan	NC	9-28-97
Faught, Wm. C.	Farmersburg	R.	10-11-97	Stock, L. K.	Sullivan	E.	7-16-97
Freeman, Jos.	Sullivan	R.	7-15-97	Stoddard, Oren.	Merom	R.	8-21-97
Harper, Jas. A.	Shelburn	R.	7-17-97	Stone, W. O.	Narrows	E.	7-12-97
Higbee, Geo. W.	Sullivan	H.	7-15-97	Taylor, Eliz. P.	Sullivan	H.	7-12-97
Higbee, J. L.	Sullivan	H.	7-15-97	Thompson, J. J.	Sullivan	R.	7-10-97
Hinkle, J. R.	Sullivan	R.	7-15-97	Thompson, W. N.	Sullivan	R.	7-10-97
Hoover, Loren	Paxton	R.	7-15-97	Thralls, R. T.	Hymera	NC	7-10-97
Jackson, John H.	Pleasantville	R.	8-5-97	Vandervear, R. H.	Farmersburg, NC	R.	10-6-97
Jenkins, R. L.	Carlisle	E.	11-3-97	Warner, M. E.	Carlisle	R.	7-13-97
Kennedy, Thos. W.	Farmersburg	R.	8-21-97	Whalen, R. M.	Carlisle	R.	7-12-97
Lisman, J. W.	New Lebanon	R.	8-10-97	Yager, E. J.	Graysville	R.	9-1-97
Lisman, W. A.	Carlisle	R.	8-10-97				

Regular, 39; Eclectic, 9; Homeopathic, 3; not classed, 4. Total, 55.

Switzerland County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Benedict, Jno. L.	Patriot	R.	8-6-97	Olcott, W. A.	Patriot	R.	8-16-97
Bear, L. H.	Vevay	R.	9-2-97	Pryor, Jas. A.	Patriot	E.	8-16-97
Copeland, Geo. W.	Sugar Branch	R.	8-12-97	Rous, Hannah C.	Vevay	R.	8-17-97
Copeland, R. M.	Bennington	R.	8-25-96	Shadday, Jno. H.	Moorefield	R.	7-20-97
Craig, Albert G.	Vevay	R.	7-20-97	Smith, Jno. W.	Vevay	H.	7-14-97
Culbertson, Scott	Vevay	R.	7-17-97	Stewart, A. W.	Vevay	R.	11-25-97
Douglass, D. E.	Quercus Grove	R.	7-29-97	Thieband, H. M.	Moorefield	R.	7-15-97
Greenleaf, H. A.	Markland	R.	7-28-97	Van Osdol, D. D.	Allenville	R.	7-28-97
Hayden, David N.	Sugar Branch	R.	8-2-97	Van Osdol, Jno. W.	Allenville	R.	8-14-97
Jamieson, R. A.	Patriot	R.	8-16-97	Van Pelt, G. W.	Vevay	R.	7-17-97
Langsdale, J. M.	Florence	R.	8-14-97	Ward, J. P.	Vevay	R.	10-2-97
Loomis, Chas.	Florence	R.	7-20-97	Wells, Isaac E.	Moorefield	R.	9-8-97
Long, Holland P.	Sugar Branch	R.	10-13-97	Woolen, L. J.	Vevay	R.	7-17-97

Regular, 24; Eclectic, 1; Homeopathic, 1. Total, 26.

Tippecanoe County.

Ackermann, A. C.	Lafayette	H.	7-19-97	McMahan, A. A.	Lafayette	R.	11-30-97
Alexander, W.	Montmorenci	R.	7-13-97	Miller, W. H.	Lafayette	R.	9-4-97
Allen, Ethan	Lafayette	R.	8-7-97	Moffitt, Wm. R.	Lafayette	R.	7-13-97
Anderson, J. H.	Colburn	R.	*	Morehouse, J. L.	Lafayette	R.	8-7-97
Beauch, Sam'l L.	Lafayette	R.	7-20-97	Motter, T. S.	Dayton	E.	7-30-97
Beasley, Geo. F.	Lafayette	R.	7-8-97	Nesbitt, Wm. S.	Monitor	R.	7-21-97
Biddle, Frank M.	Battle Ground	R.	7-13-97	Ogborn, Job O.	Lafayette	E.	7-16-97
Boyd, B. H.	Lafayette	R.	7-20-97	Peters, W. H.	Lafayette	R.	7-27-97
Brown, W. W. C.	Lafayette	NC	7-14-97	Potel, C.	Lafayette	R.	7-15-97
Butler, Wm. F.	Stockwell	R.	11-30-97	Powers, E. D.	Lafayette	R.	7-17-97
Cameron, J. J.	Lafayette	R.	*	Pyke, A. D.	Romney	R.	9-2-97
Campbell, Wm. S.	West Point	R.	7-16-97	Riddile, H. D.	Battle Ground	R.	*
Charles, R. E.	West Point	R.	7-17-97	Rodenbuis, Evert	Lafayette	R.	7-24-97
Charter, J. H.	Lafayette	E.	7-19-97	Robinson, R. D.	Lafayette	R.	7-24-97
Comstock, H. W.	Lafayette	R.	9-13-97	Rush, M. A.	Lafayette	R.	7-17-97
Crider, G. W.	Buck Creek	R.	8-2-97	Sargent, Theo. C.	Lafayette	R.	7-17-97
Crouse, J. H.	Dayton	R.	7-17-97	Schaible, Emil	Lafayette	R.	7-23-97
Davidson, E. C.	Lafayette	R.	7-22-97	Seawright, S. R.	Lafayette	R.	8-10-97
Dienhart, M.	Lafayette	E.	7-27-97	Shoup, A. W.	Battle Ground	R.	12-21-97
Driscoll, C. C.	Lafayette	R.	7-23-97	Simison, John	Romney	R.	7-30-97
Dunbar, James	Battle Ground	R.	7-17-97	Simison, J. F.	Romney	R.	7-30-97
Ellis, J. D.	Clark's Hill	R.	7-28-97	Smith, J. M.	Lafayette	H.	7-17-97
Fickle, J. M.	Stockwell	E.	7-28-97	Smith Wm. H.	Lafayette	R.	7-27-97
Fox, S. R.	Lafayette	R.	8-13-97	Snyder, Leander	Lafayette	R.	8-12-97
Glenton, Mary V.	Lafayette	R.	*	Solt, Wm. J.	Buck Creek	R.	7-20-97
Gray, Jas. A.	Lafayette	R.	7-21-97	Taylor, Wm. R.	Lafayette	R.	11-12-97
Green, Leonard T.	Odell	R.	7-17-97	Tea, R. S.	Lafayette	R.	7-15-97
Harbaugh, C. A.	Lafayette	NC	*	Test, F. C.	Lafayette	R.	*
Helfrich, H. J.	Clark's Hill	R.	7-27-97	Test, Erastus	Lafayette	R.	7-15-97
Hillis, Jas. D.	Lafayette	R.	*	Thompson, F. B.	Lafayette	R.	7-15-97
Hiner, F. T.	Lafayette	R.	7-15-97	Throckm'ton, G. K.	Lafayette	R.	7-15-97
Hopper, M. S.	Lafayette	R.	7-14-97	Tilson, Washburn	Lafayette	H.	*
Hupe, Chas.	Lafayette	R.	7-15-97	Tresch, P. J.	Lafayette	R.	12-7-97
Irwin, L. M.	Lafayette	R.	7-15-97	Vinnedge, W. W.	Lafayette	NC	7-15-97
Johnson, John M.	Lafayette	PM	11-5-97	Walker, Wm. S.	Lafayette	R.	7-15-97
Keiper, Geo. F.	Lafayette	R.	7-21-97	Washburn, G. W.	Lafayette	E.	7-15-97
Kern, Chas. B.	Lafayette	H.	*	Washburn, S. S.	Lafayette	R.	7-21-97
Kirkpatrick, G. W.	Lafayette	R.	7-19-97	Webster, J. C.	Lafayette	R.	7-8-97
Koonse, J. P.	Lafayette	R.	7-17-97	Wells, A. A.	Lafayette	R.	8-4-97
Lairy, Mansen	Lafayette	R.	7-15-97	Westfall, A. B.	Lafayette	R.	7-19-97
Littell, John V.	Lafayette	R.	7-15-97	Wetherill, R. B.	Lafayette	R.	7-15-97
Lockhart, A. S.	Stockwell	R.	10-1-97	Wilson, M. C.	Lafayette	R.	6-24-97
Mace, Wm. D.	Lafayette	R.	7-21-97	Wright, S. G.	Lafayette	R.	10-6-97
McBride, Wm. F.	Dayton	R.	7-15-97	Yager, J. W.	Lafayette	R.	8-12-97
McCray, Wm. F.	Clark's Hill	E.	7-22-97	Yonkey, Wm. P.	Lafayette	R.	7-16-97
McMahan, Adah	Lafayette	R.	11-8-97				

Regular, 76; Eclectic, 7; Homeopathic, 4; Physio-Medical, 1; not classed, 3. Total, 91.

Tipton County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Amor, Edward N	Kempton	R	8-7-97	McKee, Wm. E.	Goldsmith	R	11-13-97
Austin, Winger	Windfall	R	8-24-97	Mehlig, H. M.	Tipton	R	10-6-97
Chance, B. V.	Windfall	R	8-4-97	Michael, A.	Tipton	H	7-20-97
Cochran, Thos. C	Sharpsville	R	7-16-97	Newcomer, M. V. B.	Tipton	R	7-24-97
Cooper, John	Groomsville NC	R	9-10-97	Plough, M. T.	Kempton	R	7-15-97
Dickey, Andrew S	Tipton	R	8-6-97	Powell, Jas. R.	Tipton	R	7-24-97
Doan, N. W.	New Lancaster	R	8-3-97	Rugh, J.	Kempton	R	7-24-97
Dooley, W. P.	Windfall	R	7-29-97	Read, H. G.	Tipton	R	7-24-97
Downing, S. G.	Hobbs	R	7-20-97	Records, R. M.	Tipton	R	7-16-97
Goar, Chas. S.	Goldsmith	R	9-8-97	Repp, Geo. R.	Tipton	R	7-22-97
Gossett, Lucy	Kempton	R	7-23-97	Roads, Anna E.	Tipton	R	8-12-97
Hildrup, Harry E.	Tipton	R	7-29-97	Rubush, D. P.	Sharpsville	R	7-16-97
Winkle, E. I.	Goldsmith	H	7-16-97	Russell, Geo. A.	Tipton	R	7-15-97
Huron, W. J.	Tipton	H	7-14-97	Spitzmuller, J. L.	Windfall	R	9-20-97
Jessup, Jno. T.	Curtisville	R	7-9-97	Tressider, J. T.	Tipton	R	11-23-97
King, F. B.	Windfall	R	8-11-97	Tressider, Sarah E.	Tipton	R	11-23-97
Longfellow, T. W.	Hobbs	R	7-21-97	Welchel, T. C.	Goldsmith	R	9-3-97
McCreary, O. P.	Windfall	R		Wood, Geo. C.	Windfall	R	9-14-97

Regular, 32; Eclectic, 1; Homeopathic, 3; not classed, 1. Total, 37.

Union County.

Beard, E. R.	Liberty	R	8-4-97	Kell, S. D.	Liberty	R	9-2-97
Byler, J. M.	Liberty	H	7-9-97	Morris, J. E.	Liberty	R	7-8-97
Egolf, H. M.	Liberty	R	7-10-97	Pigman, Garrett.	Liberty	R	7-17-97
Foadick, A. C.	Liberty	R	7-30-97	Risinger, W. E.	Billingsville	R	10-6-97
Hawley, W. H.	College Corner	R	9-20-97	Shriner, W. W.	Liberty	E	12-20-97
Hawley, A. D.	College Corner	R	7-19-97	Smith, J. A.	Brownsville	R	7-17-97

Regular, 10; Eclectic, 1; Homeopathic, 1. Total, 12.

Vanderburgh County.

Achilles, F. W.	Evansville	R	7-10-97	Fricke, Richard	Evansville	R	7-22-97
Bacon, C. P.	Evansville	R	7-10-97	Fritsch, Wm. A.	Evansville	R	7-15-97
Baughman, J. N.	Evansville	R	7-17-97	Fritsch, Ludwig	Evansville	R	7-20-97
Begley, B. W.	Inglesfield	R	7-23-97	Gilbert, Wm. H.	Evansville	R	11-2-97
Binkley, Jno. T.	Evansville	R	7-14-97	Glover, Jno. F.	Evansville	R	7-17-97
Bitz, L. B.	Evansville	R	7-28-97	Gowdey, Clarence	Evansville NC		
Blount, J. F.	Evansville	H	7-14-97	Green, W. S.	Evansville	R	7-15-97
Boydson, C. F.	Evansville	R	7-14-97	Gumaer, C. H.	Evansville	R	7-17-97
Brose, L. D.	Evansville	R	7-17-97	Hargan, Thos. J.	St. Wendall	R	7-17-97
Bryan, A. H.	Evansville	R	7-15-97	Hargan, H. C.	St. Joseph	R	7-15-97
Bryan, S. L.	Evansville	R	7-27-97	Harpole, C. B.	Evansville	H	8-10-97
Buckner, C. W.	Evansville	R	7-14-97	Hartloff, Richard	Evansville	R	7-14-97
Busse, Katherine S	Evansville	R	*	Hartloff, C. W.	Evansville	R	7-24-97
Busse, E. P.	Evansville	R	*	Hayden, A. M.	Evansville	R	7-15-97
Cain, D. B.	Evansville	H	8-16-97	Hayhurst, A. S.	Evansville	R	7-15-97
Cantrall, Francis A	Evansville	R	7-16-97	Hodson, Geo.	Evansville	R	7-15-97
Clark, O. L.	Evansville	R	7-16-97	Holley, Geo. W.	Evansville	R	*
Clark, J. H.	Evansville	R	7-17-97	Hooker, H. H.	Oak Dam	R	9-1-97
Cleveland, W. F.	Evansville	R	7-15-97	Hughes, M. L.	Evansville	R	10-1-97
Clippinger, W. F.	McCutchville	R	7-19-97	Illing, A. F.	Evansville	R	7-26-97
Cluthe, C. F.	Evansville	R	7-16-97	Jerome, J. N.	Evansville	R	7-16-97
Cole, W. J.	Evansville	R	7-21-97	Johnson, J. H.	Evansville	H	8-11-97
Compton, J. W.	Evansville	R	7-17-97	Kerth, J. H.	Evansville	R	7-15-97
Compton, M. J.	Evansville	R	7-15-97	Knapp, Chas.	Evansville	R	7-14-97
Compton, F. S.	Evansville	R	7-15-97	Knapp, A. J.	Evansville	R	7-15-97
Cottingham, I. E.	Evansville	R	7-22-97	Laval, Wm. J.	Evansville	R	7-17-97
Cox, David A.	Howell	R	8-12-97	Laval, Jno.	Evansville	R	8-20-97
Cummings, C. C.	Evansville	R	7-26-97	Laubscher, S. R.	Evansville	R	*
Davis, F. L.	Evansville	H	7-24-97	LeHardy, J. C., Jr.	Evansville	R	7-21-97
Day, Benj. J.	Evansville	R	7-14-97	Linthicum, E.	Evansville	R	8-11-97
Dixon, Henry T.	Evansville	R	7-14-97	Macer, Thos.	Evansville	E	7-14-97
Dunlevy, Chas. G.	Evansville	H	7-15-97	Maghee, J. M.	Evansville	R	7-24-97
Dunn, Rose M.	Evansville	R	7-28-97	Maghee, W. H.	Evansville	R	*
Eddy, Louis E.	Evansville	R	*	Martin, W. H.	Evansville	R	7-16-97

Vanderburgh County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Mason, G. C.	Evansville	R.	8-4-97	Stieler, Marie	Evansville	H.	7-16-97
McClurkin, Jos. C.	Evansville	R.	7-15-97	Stork, J. W.	Inglesfield	R.	8-20-97
McCool, Wm. E.	Evansville	R.	*	Suiter, Wilhelm	Evansville	H.	8-6-97
McCool, H. F.	Evansville	R.	9-11-97	Taylor, T. H.	Evansville	H.	7-19-97
McCoy, P. Y.	Evansville	R.	7-22-97	Tepe, Geo. W.	Evansville	R.	7-15-97
McCutchan, J. H.	Evansville	R.	7-14-97	Thomas, A. J.	Evansville	R.	8-2-97
Montoux, Jos. E.	Kasson	R.	7-20-97	Thomas, Jas.	Evansville	R.	8-17-97
Montoux, C. J. R.	Kasson	R.	*	Tillman, J. M.	Evansville	E.	8-7-97
Moore, D. A.	Evansville	R.	7-14-97	Trussler, L. S.	Evansville	R.	7-29-97
Muhlhausen, M.	Evansville	R.	7-15-97	Turner, Harriet E.	Evansville	R.	*
Musgrave, S. D.	Evansville	H.	*	Unger, W. S.	Evansville	R.	*
Nanney, Wm. N.	Evansville	R.	7-17-97	Varner, Geo. W.	Evansville	R.	7-16-97
Owen, A. M.	Evansville	R.	8-6-97	Varner, W. T.	Evansville	R.	11-25-97
Owen, Jno. E.	Evansville	R.	7-22-97	VerWayne, E. J.	Evansville	R.	7-5-97
Phares, J. W.	Howell	R.	10-27-97	Viehe, Carl G.	Evansville	H.	7-20-97
Pirnat, Jno.	Evansville	R.	7-23-97	Viehe, C. H.	Evansville	H.	7-15-97
Pollard, Wm. S.	Evansville	R.	7-16-97	Walker, Edwin	Evansville	R.	7-16-97
Powell, T. E.	Evansville	R.	7-17-97	Weever, Geo. S.	Evansville	NC.	8-5-97
Powers, S. J.	Evansville	R.	7-17-97	Weever, Jno. B.	Evansville	R.	8-5-97
Prichett, W. S.	Evansville	R.	7-15-97	Wertz, Toliver	Evansville	R.	7-15-97
Ralston, W. G.	Evansville	R.	7-16-97	Whistler, L. M.	Evansville	H.	7-16-97
Reaves, Wm. J.	Evansville	R.	8-7-97	Whittinghill, J. L.	McCutchville	E.	10-18-97
Richstein, J. J.	Evansville	R.	7-15-97	Whitledge, H. E.	Evansville	R.	*
Rose, Benj. S.	Evansville	R.	7-16-97	Willis, J. H.	Evansville	R.	8-18-97
Schultz, Theo.	Evansville	H.	7-17-97	Wilton, Isaiah	Evansville	R.	7-15-97
Schuyler, P. L.	Evansville	R.	7-16-97	Witting, A. P.	St. Joseph	R.	7-27-97
Sessions, S. K.	Evansville	R.	8-7-97	Worsham, L.	Evansville	R.	8-4-97
Smith, Thos.	Kratzville	R.	7-29-97	Young, Geo. M.	Evansville	R.	7-23-97
Sterman, W. F.	Evansville	R.	7-23-97	Zermahlen, Chas.	Evansville	H.	9-23-97

Regular, 105; Eclectic, 4; Homeopathic, 15; not classed, 2. Total, 126.

Vermillion County.

Aikman, E. A.	Clinton	R.	9-30-97	Nebeker, Henry	Clinton	NC.	*
Barnes, J. A.	Perryville	R.	7-22-97	Newton, J. T.	St. Bernice	R.	7-21-97
Bogart, J. H.	Clinton	R.	8-31-97	Newton, G. O.	Dana	R.	7-27-97
Casebeer, E. M.	Hillsdale	R.	8-12-97	Patterson, W. P.	Toronto	R.	9-6-97
Darroch, W. P.	Cayuga	R.	*	Ray, D.	Gessie	R.	7-21-97
Flaucher, E. A.	Cayuga	R.	9-8-97	Richardson, G. T.	Cayuga	R.	8-16-97
Hall, Melvin L.	Newport	R.	9-11-97	Sanders, F. E.	Perryville	R.	9-3-97
Harrison, R. G.	Hillsdale	E.	8-18-97	Shepard, Lewis	Quaker	R.	10-4-97
Harrison, Jno. C.	Hillsdale	E.	12-30-97	Smith, A.	Dana	R.	7-26-97
Hood, T. C.	Dana	R.	*	Vawter, F. L.	Gessie	R.	*
Keyes, O. M.	Dana	R.	9-8-97	Wallace, Jas.	Newport	R.	7-21-97
Kindermann, A.	Eugene	R.	*	Washburn, A. A.	Clinton	R.	*
Loomis, E. C.	Perryville	R.	*	Watson, J. M.	Clinton	R.	8-21-97
Lowndale, T. N.	St. Bernice	R.	8-28-97	Webb, Jas. B.	Perryville	E.	7-22-97
Mack, E.	Hillsdale	E.	8-14-97	White, C. M.	Clinton	R.	*
Morgan, Jno. H.	Clinton	R.	*				

Regular, 26; Eclectic, 4; not classed, 1. Total, 31.

Vigo County.

Baker, Will H.	Terre Haute	H.	7-22-97	Caldwell, H. H.	Terre Haute	R.	7-26-97
Baldrige, Jno. H.	Terre Haute	E.	7-14-97	Carson, L. E.	Prairieton	R.	7-17-97
Ball, Lawrence S.	Prairieton	E.	7-28-97	Casto, J. C.	Prairieton	R.	9-20-97
Bell, W. E.	Terre Haute	R.	*	Collings, Wm. O.	Pimento	R.	7-27-97
Belt, Richard	Terre Haute	E.	7-17-97	Combs, M. R.	Terre Haute	R.	8-2-97
Bennett, S. M.	New Goshen	E.	7-21-97	Crapo, John R.	Terre Haute	R.	7-15-97
Brown, T. F.	Newford	R.	7-15-97	Crapo, Geo. W.	Terre Haute	R.	7-19-97
Brunker, J. W.	Riley	R.	7-28-97	Crooks, Jacob H.	Coal Bluff	E.	7-30-97
Burris, S. O.	Seeleyville	R.	7-15-97	Crozier, W. J.	Terre Haute	R.	*
Cabell, A. L.	Terre Haute	R.	7-24-97	Davis, Wm. S.	Terre Haute	R.	7-20-97

Vigo County—Continued.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Dolson, Jas. B.	Pimento	R.	7-20-97	Niblack, E. S.	Terre Haute	R.	7-17-97
Drake, Jas. F.	Youngstown	R.	7-24-97	Patton, B. E.	Terre Haute	E.	8-24-97
Drake, Thos. G.	Prairieton	R.	8-11-97	Patton, Madge L.	Terre Haute	R.	7-17-97
Drake, Thos. A.	Prairieton	R.	8-26-97	Payne, A. T.	Terre Haute	R.	7-16-97
Dupuy, Chas. M.	Riley	R.	9-18-97	Pinson, Jas. A.	Terre Haute	R.	7-16-97
Eastman, M. E.	Terre Haute	E.	9-13-97	Rice, S. M.	Terre Haute	R.	*
Eichelberger, W. C.	Terre Haute	R.	7-21-97	Rich, F. D.	Terre Haute	H.	9-4-97
Elder, Wm. R.	Terre Haute	H.	7-23-97	Roberts, W. H.	Terre Haute	R.	*
Ferris, W. W.	Terre Haute	R.	12-20-97	Rowe, Thos. C.	Coal Bluff	R.	8-3-97
Footo, Z. H.	Lewis	R.	11-23-97	Russell, C. W.	Riley	R.	7-27-97
Gerstmeyer, Chas.	Terre Haute	R.	7-21-97	Rynerson, B. F.	Prairie Creek	R.	9-7-97
Givens, Chas. C.	Lewis	R.	7-26-97	Schell, Walker	Terre Haute	R.	7-14-97
Glover, Elmer E.	Terre Haute	R.	9-10-97	Shaley, F. W.	Terre Haute	R.	7-24-97
Hartley, H. J.	Terre Haute	R.	7-20-97	Smick, C. M.	Terre Haute	R.	7-14-97
Hays, Florence W.	Terre Haute	R.	*	Smith, E. W.	Terre Haute	R.	7-15-97
Hiatt, Rufus	Terre Haute	R.	*	Spaulding, Thos.	Terre Haute	E.	8-2-97
Hunt, John S.	Macksville	R.	7-17-97	Spotswood, E. T.	Terre Haute	R.	8-13-97
Jenkins, W. O.	Terre Haute	R.	7-24-97	Stark, Wm. I.	Fontanet	H.	8-6-97
Johnston, M. A.	Terre Haute	R.	11-29-97	Stephens, E. H.	Terre Haute	R.	*
Langhead, Jas. T.	Terre Haute	R.	7-16-97	Stunkard, T. C.	Terre Haute	R.	7-23-97
Larkins, E. L.	Terre Haute	R.	7-23-97	Swafford, B. F.	Terre Haute	R.	7-17-97
Lloyd, Thos.	Prairie Creek	R.	8-3-97	Swap, Jno. H.	Sanford	R.	7-20-97
Luckett, L. P.	Terre Haute	R.	7-21-97	Tabor, Frank A.	Terre Haute	R.	*
Mason, Jno. C.	Prairieton	R.	7-17-97	Talbot, John M.	Prairie Creek	R.	8-18-97
Mason, T. A.	Terre Haute	R.	7-19-97	Thompson, H. H.	Terre Haute	H.	*
Mattox, W. R.	Terre Haute	R.	10-11-97	Watkins, Samuel	Edwards	R.	10-5-97
Mayfield, Thos. B.	Terre Haute	R.	7-19-97	Watters, M. H.	Terre Haute	H.	7-17-97
McAllister, E. B.	Terre Haute	R.	7-19-97	Weaver, Odel	Terre Haute	R.	7-15-97
McBride, T. N.	Terre Haute	H.	11-20-97	Weinstein, J. H.	Terre Haute	R.	10-19-97
McCarty, J. W.	Terre Haute	PM	*	Weinstein, Leg. J.	Terre Haute	R.	8-20-97
McClain, L.	Terre Haute	R.	11-10-97	Weir, S. D.	Terre Haute	R.	*
McCorkle, T. H.	Edwards	R.	*	Wiedmann, F. E.	Terre Haute	R.	*
McGrew, J. E.	Pimento	R.	*	Willien, L. J.	Terre Haute	R.	7-19-97
McJohnson, W. E.	Terre Haute	R.	7-16-97	Willien, Wm. F.	Terre Haute	R.	*
McJohnson, A. D.	Pimento	R.	8-6-97	Willis, J. R.	Terre Haute	R.	12-30-97
Melton, S. B.	Fontanet	R.	7-15-97	Wood, Anna	Terre Haute	R.	7-21-97
Miller, R. B.	Terre Haute	R.	*	Worrell, J. P.	Terre Haute	R.	11-6-97
Moore, Wilmot	Terre Haute	H.	*	Wyeth, Chas.	Terre Haute	R.	7-17-97
Moore, M. W.	Terre Haute	R.	9-11-97	Young, S. Y.	Terre Haute	R.	7-16-97
Neal, E. M.	Burnett	R.	7-21-97	Zimmerman, C. F.	Terre Haute	R.	7-24-97

Regular, 83; Eclectic, 8; Homeopathic, 8; Physio-Medical, 1. Total, 100.

Wabash County.

Ader, Henry	Somerset	R.	7-27-97	King, C. H.	S. Wabash	R.	10-14-97
Banister, R. L.	Wabash	H.	12-28-97	Kitson, Frank S.	N. Manchester	R.	7-16-97
Barnett, Jos. S.	N. Manchester	R.	9-3-97	Lancaster, T. A.	N. Manchester	R.	8-9-97
Bash, I. A.	Somerset	R.	*	LaSalle, G. M.	Wabash	H.	7-21-97
Blount, R. F.	Wabash	R.	7-7-97	Lower, M. O.	N. Manchester	R.	7-15-97
Brady, T. R.	Wabash	R.	7-10-97	McGrew, W. H.	LaFontaine	E.	7-23-97
Bricker, Wm	Wabash	E.	7-14-97	McKee, H. N.	LaGro	R.	7-15-97
Brodbeck, G. H.	Roann	R.	12-1-97	Misener, H. E.	N. Manchester	PM	9-2-97
Case, Augustus	Lincolnvill	R.	7-23-97	Modriker, J. M.	Wabash	R.	7-15-97
Dicken, Jas. D.	LaFontaine	R.	8-2-97	Mooney, H. C.	Laketon	R.	10-8-97
Dicken, C. L.	LaFontaine	R.	7-22-97	Moore, P. J.	Wabash	R.	7-15-97
Donaldson, E. F.	Wabash	R.	11-11-97	Murphy, D. S.	Wabash	R.	7-15-97
Egbert, R. E.	Wabash	R.	8-14-97	Murphy, Reuben	Wabash	R.	9-20-97
Elliott, G. W.	Rich Valley	PM	7-17-97	O'Neal, L.	Somerset	R.	7-27-97
Ford, Jas. H.	Wabash	R.	7-16-97	Renner, M. E.	Urbana	R.	7-17-97
Fouts, P. G.	Red Bridge	R.	8-12-97	Renner, Jno. H.	LaGro	R.	8-3-97
Freeze, Jno. A.	Wabash	R.	12-31-97	Shaffer, Philip	N. Manchester	R.	7-28-97
Giffin, R. T.	Rora	R.	8-14-97	Shellheimer, D. C.	S. Wabash	E.	10-8-97
Ginther, David	N. Manchester	E.	7-28-97	Smith, A. J.	Wabash	R.	7-15-97
Goshorn, D. A.	N. Manchester	NC	7-30-97	Smith, L. F. J.	Wabash	R.	9-24-97
Hale, Marcus M.	Wabash	R.	8-13-97	Smith, L. W.	Wabash	R.	7-23-97
Hale, Norman T.	Wabash	R.	7-15-97	Sowers, J. W.	Disko	R.	10-24-97
Harding, G. W.	Wabash	R.	9-28-97	Stewart, W. F.	Wabash	H.	7-17-97
Hollingsworth, AS	Urbana	E.	7-20-97	Stewart, J. W. G.	Wabash	H.	7-19-97
Houser, B. A.	Somerset	R.	7-24-97	Thompson, N. H.	Wabash	R.	7-21-97
Jordan, L. W.	N. Manchester	H.	*	Wells, W. Y.	Laketon	R.	8-2-97
Kantz, Jno.	LaGro	R.	7-28-97	Williams, J. B.	Wabash	R.	10-1-97
Keim, P. S.	N. Manchester	R.	11-27-97	Wilson, Jas.	Wabash	R.	7-20-97
Kidd, G. P.	Roann	R.	*	Wilson, Anna L.	Wabash	H.	7-23-97

Regular, 44; Eclectic, 5; Homeopathic, 6; Physio-Medical, 2; not classed, 1. Total, 58.

Warren County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Benard, G. W.	Rainsville	H.	7-19-97	McInnis, Mary E.	Pine Village	H.	7-22-97
Campbell, T. B.	W. Lebanon	R.	9-11-97	McMullen, J. W.	Pine Village	R.	7-27-97
DeHart, Jacob	Williamsport	R.	7-21-97	Orr, O. B.	Marshfield	R.	*
Delancy, S. S.	Williamsport	H.	7-15-97	Reagan, Theo.	State Line	R.	9-11-97
Dinsmore, W. H.	Ind. M. Spgs.	R.	7-20-97	Rosebury, I. A.	Independence	R.	8- 7-97
Dunaway, I. H.	W. Lebanon	R.	*	Swank, Leroy	Williamsport	R.	7-16-97
Fuller, Ira H.	Pine Village	H.	7-21-97	Tanner, H. S.	Ind. M. Spgs.	E.	8-26-97
Johnson, Chas. F.	Ind. M. Spgs.	H.	10-20-97	Trent, John H.	Marshfield	R.	7-23-97
Jones, Boyd	Carbondale	R.	8-11-97	Vick, W. B.	Green Hill	E.	8- 9-97
Keefer, F. R.	Marshfield	R.	7-20-97	Watson, Jas. R.	W. Lebanon	R.	10-21-97
McAfee, E. M.	Ind. M. Spgs.	H.	10-23-97	Wilson, Sam'l R.	Hedrick	R.	8-12-97

Regular, 14; Eclectic, 2; Homeopathic, 6. Total, 22.

Warrick County.

Aust, F. T.	Tennyson	R.	8-11-97	McCoy, T. J.	Eby	E.	7-21-97
Beeler, J. S.	Boonville	H.	7-23-97	McVey, W. H.	DeGonia Spgs	E.	7-27-97
Benson, R. A.	Weltes	R.	9-30-97	Mills, Wm. H.	Canal	E.	7-27-97
Brown, A. P.	Elberfeld	R.	10-18-97	Mills, Mary	Chandler	H.	7-17-97
Brown, Leander	Elberfeld	NC	11- 9-97	Nenneker, Henry	Elberteld	R.	10-25-97
Camp, G. H.	Lynnville	E.	7-30-97	Newton, Grant	Boonville	H.	7-16-97
Camp, J. W.	Lynnville	E.	7-23-97	Parke, Chas. R.	Boonville	R.	7-16-97
Camp, Wm. F.	Lynnville	E.	7-27-97	Rhodes, H. S.	Yankeetown	H.	8- 3-97
Dailey, Wm. W.	Stanley	R.	10- 5-97	Scales, H. W.	Boonville	R.	7-21-97
DeForest, D. F.	Boonville	R.	8- 5-97	Schuck, John H.	Weltes	R.	7-16-97
DeForest, D. A.	Boonville	R.	8- 5-97	Shane, Monroe	Boonville	R.	7-17-97
Dubois, Geo. M.	Lynnville	H.	7-16-97	Shaughter, W. W.	Newburgh	R.	*
Ford, Wm. P.	Boonville	R.	7-24-97	Spradley, N. M.	Selvin	R.	8-24-97
Hart, Elihu H.	Tennyson	R.	7-16-97	Spradley, L. G.	Dickeyville	R.	9-14-97
Hewins, Wm. A.	Chandler	R.	7-15-97	Springstun, C. E.	Selvin	R.	12-27-97
Hoover, P. N.	Boonville	H.	7-17-97	Tucker, L. G.	Boonville	R.	7-15-97
Howard, T. M.	Boonville	R.	7-15-97	Tyner, S. L.	Newburgh	H.	8-19-97
Hunt, W. A.	Lynnville	R.	*	Waldron, W. M.	Newburgh	R.	12-31-97
Jones, Thos. B.	Lynnville	R.	7-29-97	Watson, W. D.	Tennyson	R.	*
Jones, F. M.	Stephenson	R.	7-27-97	West, T. A.	Folsomville	E.	*
Keegan, C. J.	Canal	R.	8-17-97	Wilde, G. O.	Boonville	R.	7-15-97
Kelley, G. C.	DeGonia Spgs.	H.	7-16-97	Williams, G. L.	Folsomville	R.	7-27-97
Kiefer, Chas.	Newburgh	R.	7-15-97	Wilson, Dalton	Yankeetown	R.	8-16-97
Kister, Geo. H.	Elberfeld	R.	12-22-97	Wilson, Wesley	Yankeetown	R.	7-28-97
Lacke, Geo.	Newburgh	R.	7-26-97	Wright, Thos.	Boonville	R.	7-17-97
Lett, O. A.	Newburgh	R.	9-14-97	Zimmerman, J.	Lynnville	R.	8-20-97
Magenheimer, P.	Chandler	R.	7-19-97				

Regular, 38; Eclectic, 6; Homeopathic, 8; not classed, 1. Total, 53.

Washington County.

Armstrong, B. M.	Fredericksb'g.	R.	7-21-97	Martin, R. W.	Salem	R.	7-15-97
Baker, Thos. H. B.	Pekin	R.	7-14-97	Mayfield, Marcel's	Salem	R.	*
Bare, Jno. R.	Salem	R.	7-14-97	McPheeters, J. S.	Hardinsburg	R.	12-29-97
Barnett, Jno. T.	Hardinsburg	R.	8-20-97	Mills, Richard	Salttilloville	R.	7-19-97
Bradshaw, A. E.	Halo	R.	7-27-97	Mitchell, J. J.	Canton	R.	12- 6-97
Bright, Wm. H.	Martinsburg	R.	8-10-97	Morris, Wilber B.	Canton	NC	*
Dewees, Geo. W.	Fredericksb'g.	R.	10- 1-97	Murphy, C. W.	Salem	R.	*
Doolittle, J. H.	Campbellsb'g.	R.	7-29-97	Neyman, M. C.	Salttilloville	R.	8-21-97
Freece, Isaac	Livonia	R.	8-23-97	Oatley, Jno. H.	New Philade'a	R.	8-17-97
Furtes, Henry C.	Hardinsburg	R.	9- 9-97	Overman, Wm.	Salem	PM	7-15-97
Gill, I. W.	Campbellsb'g.	R.	7-19-97	Paynter, H. M.	Salem	R.	9- 4-97
Hall, Ivy G.	Campbellsb'g.	PM	*	Paynter, L. W.	Campbellsb'g.	R.	8-17-97
Hancock, G. S.	Campbellsb'g.	R.	7-16-97	Purkhiser, W. J.	Salem	R.	7-20-97
Herron, Thos. W.	Lesterville	R.	11-13-97	Reed, A. A.	Kossuth	R.	8- 2-97
Hobbs, H. C.	Salem	R.	8- 7-97	Roberts, Sam'l A.	Campbellsb'g.	R.	8- 7-97
Holaday, Benj. M.	Livonia	R.	8-10-97	Spurgeon, C.	Kossuth	R.	7-31-97
Howard, S. B.	Kossuth	R.	7-31-97	Spurgeon, A. N.	Kossuth	R.	7-26-97
Hudson, L. H.	Little York	E.	8-28-97	Sturdevant, M. G.	Chestnut Hill	R.	7-19-97
Kelley, J. F.	Livonia	R.	*	Voyles, V. A.	Salem	R.	*
Lukenhill, L. C.	Campbellsb'g.	R.	8-12-97	Wilson, R. J.	Salem	R.	8- 7-97

Regular, 36; Eclectic, 1; Physio-Medical, 2; not classed, 1. Total, 40.

Wayne County.

Name.	Residence.	School.	Date of County License.	Name.	Residence.	School.	Date of County License.
Allen, J. B.	Hagerstown.	R.	7-19-97	King, J. E.	Centerville.	R.	7-19-97
Ballard, N. H.	Richmond.	R.	7-9-97	Kinsey, J. H.	Richmond.	PM.	7-15-97
Beam, A. H.	Williamsburg.	PM.	7-21-97	Littell, W. R.	Cambridge C'y.	R.	7-19-97
Benham, H. R.	Richmond.	E.	7-27-97	Lucas, Wm. A.	Richmond.	R.	6-29-97
Best, W. P.	Dublin.	E.	7-28-97	Lucken, J. H.	Richmond.	R.	7-15-97
Bond, C. S.	Richmond.	R.	7-30-97	Mank, J. R.	Cambridge C'y.	R.	7-289-7
Bopport, A.	Richmond.	R.		Marvel, Chas.	Richmond.	R.	7-159-7
Boyd, H. B.	Cambridge City.	R.	7-19-97	McDivitt, E. G.	Richmond.	R.	7-199-7
Brower, E. V.	Richmond.	PM.	7-26-97	McTaggart, C. R.	Dub in.	E.	
Brown, E. L. A.	Dublin.	R.		Meek, M. L.	Abington.	NC.	8-4-97
Bulla, Jos. M.	Richmond.	H.	7-14-97	Meek, Jos.	Webster.	R.	7-16-97
Bunton, E. A.	Green Fork.	R.	7-21-97	Mendenhall, W. O.	Richmond.	R.	7-15-97
Canaday, M. F.	Hagerstown.	H.	7-19-97	Morrow, Sarah J.	Richmond.	R.	7-30-97
Clark, J. B.	Economy.	R.	7-21-97	Neff, W. W.	Green's Fork.	R.	9-3-97
Clark, Jno. M.	Economy.	R.	7-21-97	Pierce, Elmer E.	Richmond.	PM.	
Claburn, C. P.	Richmond.	R.	7-15-97	Rife, Jno. J.	Boston.	R.	7-21-97
Cristion, H. B. F.	Richmond.	E.	8-2-97	Robbins, Geo. W.	Richmond.	R.	7-15-97
Davis, Henry.	Richmond.	H.	7-14-97	Ru-k, Anna E.	Richmond.	PM.	7-19-97
Dempsey, Wm. S.	Richmond.	R.	7-20-97	Schillinger, R.	Richmond.	R.	7-15-97
Ehle, A. E.	E. Germant'n.	E.	7-20-97	Schillneck, V. G.	Hagerstown.	R.	7-27-97
Ewing, U. B. G.	Richmond.	R.	7-14-97	Shafer, O. B.	Hagerstown.	R.	9-15-97
Fouts, Jno. M.	Hagerstown.	R.		Smith, Sam'l E.	East Haven.	R.	8-3-97
Gabel, Harrison.	Centerville.	R.	9-8-97	Stevenson, D. W.	Richmond.	R.	7-17-97
Garber, Peter.	Jacksonburg.	R.	7-30-97	Stotelmeyer, C. I.	Hagerstown.	R.	8-10-97
Graham, Wm. B.	Richmond.	H.	7-14-97	Summers, Jno. B.	Milton.	R.	8-16-97
Grant, Geo. H.	Richmond.	R.	7-22-97	Swallow, Jas. E.	Abington.	R.	7-27-97
Griffis, Wm. T.	Fountain City.	E.	7-27-97	Sweeney, I. F.	Milton.	R.	9-14-97
Grosvenor, E. B.	Richmond.	H.	7-14-97	Taylor, L. B.	Dublin.	R.	7-30-97
Harold, I. S.	Richmond.	PM.	7-14-97	Taylor, Jas. E.	Richmond.	R.	7-15-97
Haughton, R. E.	Richmond.	R.	7-9-97	Taylor, G. W.	Fountain City.	R.	9-27-97
Heiner, E. K.	Hagerstown.	NC.	9-29-97	Teague, I. C.	Richmond.	H.	7-17-97
Helm, W. M.	Williamsburg.	E.	8-5-97	Thurston, J. M.	Richmond.	PM.	7-19-97
Henry, J. W.	Richmond.	R.	9-14-97	Thurston, E. H.	Richmond.	PM.	7-19-97
Hervey, Minnietta.	Richmond.	H.		Thurston, H. E.	Williamsburg.	PM.	
Hibbard, J. F.	Richmond.	R.	7-16-97	Tillson, Hosea.	Centerville.	R.	7-22-97
Hobbs, M. W.	Richmond.	R.	7-14-97	Walls, Jno. A.	Richmond.	PM.	7-29-97
Hopkins, R. R.	Richmond.	R.	7-15-97	Wampler, Jno. M.	Richmond.	R.	7-17-97
Huffman, Wm. G.	Richmond.	R.	7-30-97	Watts, E. K.	Richmond.	R.	7-15-97
Hutchins, F. F.	East Haven.	R.	8-16-97	Weist, J. R.	Richmond.	R.	7-22-97
Johnson, Levi C.	Fountain City.	R.	8-16-97	Weist, H. H.	Richmond.	R.	7-16-97
Johnson, R. B.	Fountain City.	R.		Wood, N. S.	Richmond.	R.	7-15-97
Johnston, M. F.	Richmond.	R.	7-15-97	Wright, J. E.	Cambridge C'y.	H.	7-21-97
Keith, H. C.	Richmond.	R.	7-15-97	Yencer, M. W.	Richmond.	R.	7-31-97
Keith, F. E.	Richmond.	R.	7-15-97	Zaring, C. T.	Richmond.	R.	7-26-97
Kerr, Jas. D.	Green's Fork.	R.		Zimmerman, W. W.	Richmond.	H.	7-15-97
Kersey, S. H.	Centerville.	R.	7-26-97				

Regular, 63; Eclectic, 7; Homeopathic, 9; Physio-Medical, 10; not classed, 2. Total, 91.

Wells County

Boxsome, A. W.	Nottingham.	R.	8-14-97	Huffman, D. C.	Craigsville.	R.	7-27-97
Blue, Capolis L.	Tocsin.	R.	*	Hunter, J. R.	Murray.	E.	7-22-97
Botts, E. H.	Zanesville.	R.	7-13-97	Landfair, C. L.	Bluffton.	H.	11-20-97
Bugh, J. W.	Bluffton.	R.	*	Mason, L.	Bluffton.	R.	7-14-97
Cassell, Geo. W.	Poneto.	R.	7-17-97	McClain, M. W.	Vera Cruz.	E.	8-6-97
Caylor, D. S.	Nottingham.	R.	8-17-97	Metts, J. I.	Ossian.	R.	7-17-97
Cook, L. H.	Bluffton.	R.	*	Metts, A. H.	Ossian.	R.	7-16-97
Davenport, E. P.	Craigsville.	R.	7-17-97	Metts, Fred A.	Ossian.	R.	*
Deweese, Roy E.	Keystone.	PM.	11-22-97	Morris, Thos.	Mt. Zion.	R.	7-28-97
Doster, H.	Poneto.	R.	7-15-97	Neff, I. N.	Mt. Zion.	R.	7-21-97
Fisher, E. S.	Markle.	R.	9-1-97	Newman, M. N.	Ossian.	R.	7-12-97
Fowler, W. N.	Bluffton.	R.	12-27-97	Rinear, Edwin.	Liberty Centre.	R.	11-22-97
Fulton, Geo. E.	Bluffton.	R.	7-21-97	Roebuck, Frank L.	Bluffton.	R.	*
Fulton, J. C.	Bluffton.	R.	7-21-97	Saunders, Jesse E.	Petroleum.	PM.	9-4-97
Garrell, A. G.	Ossian.	R.	7-24-97	Spaulding, L. A.	Bluffton.	R.	7-21-97
Garrett, Frank W.	Liberty Centre.	R.	8-17-97	Springsted, A. E.	Bluffton.	H.	7-17-97
Hatfield, I. N.	Bluffton.	R.	7-24-97	Stauffer, E. R.	Vera Cruz.	R.	7-24-97
Haughton, Asa.	Lynn Grove.	R.	8-6-97	Stockton, W. C.	Bluffton.	E.	7-149-7
Heady, F. E.	Uniondale.	R.	7-31-97	Usher, Jno. E.	Poneto.	E.	7-139-7
Hesler, Geo. F.	Tocsin.	R.	7-19-97	Waldron, R. A.	Nottingham.	R.	7-279-7
Holcomb, J. H.	Barber's Mills.	R.	8-2-97	Warner, Wm.	Bluffton.	R.	*
Horne, Brose S.	Bluffton.	R.	7-17-97	Wilson, L. J.	Domestic.	R.	7-17-97
Horton, E. R.	Bluffton.	E.	8-6-97				

Regular, 36; Eclectic, 5; Homeopathic, 2; Physio-Medical, 2. Total, 45.

White County.

<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>	<i>Name.</i>	<i>Residence.</i>	<i>School.</i>	<i>Date of County License.</i>
Allison, J. L.	Monticello	R.	11- 8-97	McCann, J. D.	Monticello	E.	9-14-97
Brockway, C. T.	Brookston	R.	8-27-97	McCully, C. H.	Burnett's C'k	R.	7-15-97
Burton, Jos. B.	Monticello	R.	9- 9-97	Medaris, J. W.	Brookston	R.	8-13-97
Carr, J. L.	Monon	R.	*	Minnick, H. R.	Idaville	R.	7-24-97
Chaffee, John A.	Chalmers	R.	7- 1-97	Morris, G. M.	Headler	R.	7-28-97
Clark, Robert J.	Monticello	R.	7-24-97	Noland, John W.	Buffalo	R.	8- 2-97
Clayton, Geo. R.	Monon	R.	8- 3-97	Palmer, R. B.	Idaville	E.	7-19-97
Cook, Wm. H.	Walcott	R.	11-22-97	Reagan, R. M.	Monon	R.	8-10-97
Cowger, S. R.	Monticello	NC.	7-15-97	Reed, John H.	Burnett's C'k	R.	11-26-97
Delzell, Robert M.	Reynolds	R.	7-17-97	Robison, F. B.	Monticello	E.	9-13-97
Didlake, M. T.	Monticello	R.	7-20-97	Sampson, Wm. H.	Brookston	E.	*
Felch, E. P.	Monticello	H.	7-16-97	Scott, Caleb	Brookston	PM.	7-26-97
Hamilton, R. A.	Brookston	E.	11- 9-97	Sluyter, S. D.	Chalmers	E.	7-21-97
Hanmore, John J.	Monticello	R.	7-15-97	Small, H. E.	Walcott	E.	7-19-97
Henry, Edgar	Monticello	E.	7-15-97	Smith, John T.	Brookston	R.	7-17-97
Henry, L. W.	Burnettsville	NC.	7-21-97	Spencer, Wm.	Monticello	R.	8- 9-97
Jones, A. B.	Burnettsville	R.	7-20-97	Stuart, John	Monon	R.	8- 6-97
Keeley, D. M.	Brookston	R.	12- 7-97	Tillett, Jesse A.	Buffalo	R.	7-24-97
Kinnerman, J. G.	Monticello	R.	*	Walker, W. O.	Walcott	R.	9- 6-97
Lister, F. E.	Brookston	R.	8-10-97	Wilkerson, H. L.	Monticello	PM.	7-19-97
McAllister, J. W.	Idaville	R.	7-27-97	Wilkerson, W. W.	Monticello	PM.	7-19-97

Regular, 28; Eclectic, 8; Homeopathic, 1; Physio-Medical, 3; not classed, 2. Total, 42.

Whitley County.

Ammerman, S. D.	Columbia City	H.	8-11-97	Merriman, E.	So. Whitley	R.	7-21-97
Barnhill, W. A.	So. Whitley	H.	8-13-97	Morrison, T. R.	Churubusco	H.	7-19-97
Coyle, Wm. H.	Hecla	R.	10- 8-97	Richards, Jno.	Laud	E.	7-17-97
Criswell, J. F.	Churubusco	R.	*	Schuman, O. B.	Columbia City	R.	7-26-97
Eberhard, E. L.	So. Whitley	R.	8-10-97	Scott, J. W. C.	Hecla	R.	7-28-97
Geary, J. K.	Coesse	R.	7-19-97	Souder, C.	Larwill	R.	8- 9-97
Grisier, F. G.	Churubusco	R.	7-19-97	Squires, J. W.	Churubusco	R.	7-30-97
Ireland, Martin	Columbia City	R.	8-2- 97	Webster, M. W.	So. Whitley	R.	8-10-97
Kirkpatrick, D.	Larwill	R.	10-28-97	Webster, D. E.	Columbia City	R.	*
Kithcart, N. L.	Columbia City	B.	8-24-97	White, Sam'l R.	Laud	R.	9-28-97
Lawrence, I. E.	Columbia City	R.	8-20-97	Williams, Alice B.	Columbia City	R.	7-15-97
Leedy, Chas. E.	Pierceton	R.	7-30-97	Wilson, C. S.	Columbia City	R.	7-15-97
Linville, D. S.	Columbia City	R.	*	Wilson, Frank D.	Collins	R.	7-26-97
Linville, D. G.	Columbia City	R.	7-15-97	Worden, Jas. W.	Columbia City	R.	7-15-97
Magers, F. M.	Churubusco	R.	8-10-97				

Regular, 26; Eclectic, 1; Homeopathic, 2. Total, 29.

OFFICIAL REGISTER—MIDWIVES.

<i>Name.</i>	<i>County.</i>	<i>Residence.</i>	<i>Date of County License.</i>
Adams, Christina	Lake	East Chicago	*
Alexander, Mary	Vanderburgh	Evansville	7-31-97
Allard, Marie F	Perry	Leopold	*
Alt, Eugenia P	Floyd	New Albany	*
Andrews, Louisa	White	Monticello	10- 6-97
Andrews, Eliza A	Vanderburgh	Evansville	10-15-97
Badertscher, Mary	Adams	Berne	7-31-97
Benson, Lydia	Jefferson	Madison	7-13-97
Berthold, Christina	Allen	Ft. Wayne	9-11-97
Brown, Matilda C	Starke	North Judson	*
Bruengger, Margaretha	Jackson	Seymour	*
Buettel, Mrs Dora	Allen	Ft. Wayne	*
Bundy, Julia F	Jennings	Vernon	8- 4-97
Collins, Sarah	Pike	Velpen	10-18-97
Cook, Mary E	Dubois	Ireland	*
Cotton, Lucinda	Jefferson	Madison	8- 3-97
Dodd, Gracie L	Marion	Indianapolis	10-23-97
Dragoo, Christina	Delaware	Cammack	8-28-97
Eberhardt, Anna M	St. Joseph	Mishawaka	*
Ebersold, Maria	Perry	Tell City	7-31-97
Eifert, Eva	Dubois	Jasper	*
Elster, Henrietta	Lake	Hammond	*
Esarey, Dorothea	Perry	Branchville	7-26-97
Evans, Mrs. Melissa	Spencer	Newtonville	8- 2-97
Fallen, Catherine	St. Joseph	Mishawaka	10-19-97
Frantzret, Theresia	Marion	Indianapolis	7-31-97
Frosch, Katherine W	Tippecanoe	Lafayette	*
Gander, Minerva J	Vanderburgh	Evansville	7-21-97
Gebel, Margaretha	Dubois	Huntingburg	*
Gehrke, Sophia	Lake	Hammond	*
Gerber, Josephine	Allen	Ft. Wayne	*
Gibson, Rebecca	Daviess	Washington	7-30-97
Goeglein, Louise A	Allen	Ft. Wayne	8-25-97
Goldman, Hannah	Crawford	Magnolia	*
Grimm, Catherine	Wells	Vera Cruz	8- 3-97
Groze, Sarah	St. Joseph	Wyatt	*
Grover, Elizabeth A	Marion	Indianapolis	10-19-97
Gutzsell, Theresia	Dubois	Jasper	8- 2-97
Hanlan, Elizabeth	Parke	Diamond	*
Harris, Ella F	Allen	Ft. Wayne	*
Henegar, Malinda W	Crawford	Taswell	7-13-97
Hinton, Mary C	Perry	Don Juan	8- 7-97
Hinton, Kittie	Clark	Jeffersonville	8- 4-97
Hodges, Ann	Vigo	W. Terre Haute	9-14-97
Hollman, Augusta	Knox	Vincennes	7-28-97
Houston, Nancy	Lawrence	Heltonville	*
Howard, Martha A	Pike	Velpen	10- 4-97
Jensen, Louisa	Vanderburgh	Evansville	*
Johnson, Rebecca E	Knox	Oaktown	9- 6-97
Jonas, Minnie	Marion	Indianapolis	8- 6-97
Kappler, Elizabeth	Tippecanoe	Lafayette	8- 2-97
Karbach, Therese	Allen	Ft. Wayne	8-16-97
Kissner, Anna E	Posey	Mt. Vernon	8-14-97
Kretz, Mrs. A. M	Dubois	Ferdinand	*
Kuper, Elizabeth	Dubois	Jasper	*
Lasley, Rhoda A	Harrison	Cedar Wood	8-17-97
Leinen, Margaretha	Lake	Whiting	*
Lencke, Theresia	Vanderburgh	Evansville	8- 2-97
Lowery, Malinda	Daviess	Washington	*
Marting, Anna M. E	Wayne	Richmond	11-22-97
Mendenhall, Mariah	Jay	Balbec	8- 4-97
Mengis, Sophia R	Jefferson	Madison	7- 8-97
Miller, Sarah J	Jay	White Oak	8-17-97
Miner, Mary	Dubois	Ellsworth	7-17-97

<i>Name.</i>	<i>County.</i>	<i>Residence.</i>	<i>Date of County License.</i>
Moore, Lucinda	Jackson	Freetown	7-16-97
McDonald, Adelia	Laporte	Tracy	8-7-97
McKasson, Margaret R.	Vanderburgh	Evansville	7-30-97
Neal, Louise R.	Monroe	Bloomington	*
Neidlinger, Katie	Marion	Indianapolis	*
Nordhoff, Theresia	Dubois	Celestine	*
Oxby, Mrs. M. E.	Pike	Spurgeon	8-6-97
Parker, Christina	Marshall	Bremen	7-31-97
Passmore, Jane	Parke	Annapolis	8-2-97
Pells, Mary J.	Marion	Indianapolis	10-1-97
Petitjean, Theresia	Gibson	Haubstadt	*
Pratt, Mrs. E. A.	Laporte	Tracy	8-79-7
Rathert, Amelia	Allen	Ft. Wayne	*
Rattiet, Emilie	St. Joseph	South Bend	10-16-97
Ray, M. T.	Lake	Shelby	10-19-97
Rickard, Claudia A.	Delaware	Muncie	8-16-97
Ridley, Rose Ann	Vanderburgh	Evansville	7-31-97
Rouchen, Catherine	Marion	Indianapolis	*
Samulowitz, Elizabeth	Jennings	Brewersville	*
Schaffner, Mary	Marion	Indianapolis	*
Scheerer, Julia	Huntington	Huntington	8-4-97
Schnokey, Minnie	Posey	Caborn	*
Schoor, Margaretha E.	Dubois	Jasper	7-19-97
Schumann, Maggie	Dubois	St. Henry	*
Shelton, Emily	Vanderburgh	Evansville	8-3-97
Shucker, Emma	Tippecanoe	Americus	9-30-97
Steed, Sophiah	Adams	Geneva	8-9-97
Stephan, Elizabeth	Allen	Ft. Wayne	*
Sweeney, Susan	Perry	Ranger	8-4-97
Thomann, Angela	Shelby	Shelbyville	*
Tucker, Abigail J.	Floyd	New Albany	7-30-97
Tucker, Eliza A.	Jay	Poling	*
Veach, Mary A.	Crawford	Wickliffe	8-21-97
Wagner, Eliza J.	Floyd	New Albany	10-30-97
Waldameier, Bertha	Marion	Indianapolis	7-30-97
Wallace, Jane	Spencer	Dale	12-7-97
Wilton, Mrs. Anna	Vanderburgh	Howell	7-17-97
Winkler, Elizabeth	Lake	Hammond	*
Wippermann, Wilhelmina	Jackson	Seymour	*
Wynn, Mollie	Marion	Indianapolis	8-14-97
Young, Susan	Lake	Hammond	*
Zahner, Louisa	Posey	West Franklin	8-4-97

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